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JANUARY 1918

FARM AND FIRESIDE

The National Farm Magazine

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IN THIS ISSUE: Captured by the Germans. Does it Pay to be Tight with Your Family? In the Spy Net. Borrowing Money from Uncle Sam

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OAKLAND SENSIBLE SIX

FARM AND FIRESIDE

The National Farm Magazine

Published Monthly by The Crowell Publishing Company at Springfield, Ohio

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IF you want to make money, enjoy health, be happy, or merely while away a few minutes, some of these articles may help you:

Page 5—Captured by the Germans — *By Ivan S. Rossiter*
A Canadian private, in the trenches nine months before he was captured at Ypres, tells how it feels to be wounded and a prisoner in the hands of the Germans.

Page 6—Prosperity Through Planning — *By D. S. Burch*
Laying out your work in advance is the only way to get winning results with the least labor. If you do not boss your work, it will surely boss you.

Page 7—Does it Pay to be Tight with Your Family? — *By Ben Bruce*
This is the confession of a man forty-eight years old, who has played life's game to win riches, but has lost the comradeship of his own family.

Page 8—When You Build Your House — *By William F. Miller*
An experienced architect describes a modern seven-room house that can be built complete in every detail for $3,500 at present prices.

Page 9—Borrowing Money from Uncle Sam — *By Frank R. Wilson*
If you want to borrow long-time, low-rate money from the Government, this article will tell you how to do it.

Page 12—In the Spy Net — *By Emel Parker*
This is the first installment of a gripping new four-part story centering around a plot to injure a submarine destroyer.

Page 14—"Just the Grippe" — *By Charles H. Lerrigo, M. D.*
La Grippe is a really serious disease. This article tells first how not to get it and what to do if you do get it.

Page 15—Farming Without Horses — *By G. F. Wilson*
What work can you do with a tractor? Mr. Wilson farmed 120 acres last year without a horse on the place

Page 16—Painting the Car — *By W. V. Relma*
While winter weather is keeping you indoors, you might repaint your car and have it looking spick and span for the coming season.

Page 20—Winter Dairying — *By J. B. Fitch*
Mr. Fitch has been studying dairying methods for several years. He tells why you will make more money by dairying during the winter months.

Page 21—To Sell the Corn or Feed It? — *By Thomas J. Delohery*
The experience of a successful Illinois cattle feeder with a bunch of 49 steers on which he made nearly $5,000 profit.

Page 22—The Garden Ideal and Real — *By Mrs. E. M. Anderson*
January is not too early to start gardening. There are many things that may be done this month that will increase the yield next summer.

Page 25—Getting Big Early Hatches — *By C. L. Hobb*
Success in hatching depends on the fertility of the eggs, and the strength and vigor of the hens determine the fertility of the eggs.

Page 28—Speeding-Up Housework — *By Monica Kelly*
The Corner Club discusses the shortage of help and the greater wartime demands on the housewife, and the members exchange helpful ideas.

Page 31—Looking Your Best — *By Margaret Drummond*
Massage is the best instrument for preventing wrinkles and keeping the skin smooth and fair. Miss Drummond tells you the latest methods.

Our February Number

A few of the many interesting articles in the next issue: How I Made a Million Dollars Farming; Making the Hens Lay at Night; Women in the War; When You Ask Your Banker for a Loan; So You Won't Have Pneumonia; The Booze Fighter; The Seed-Corn Crisis; A Man Chooses.

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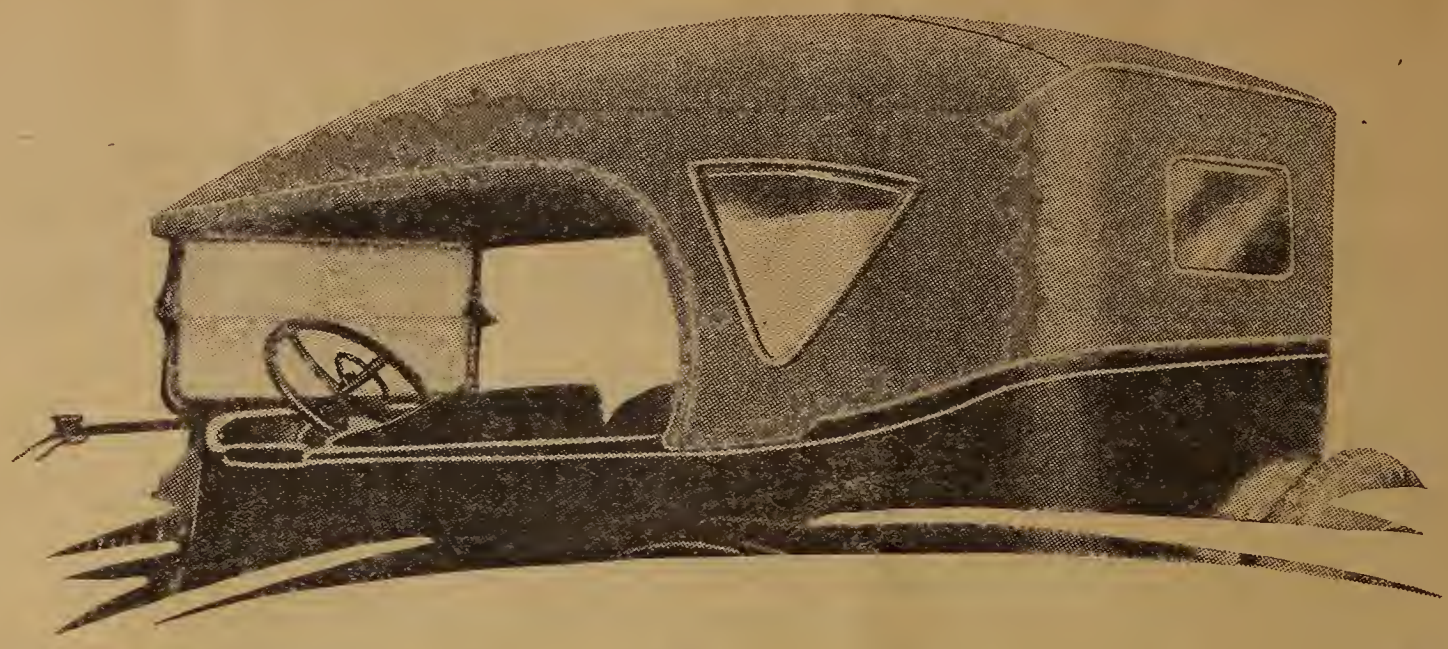

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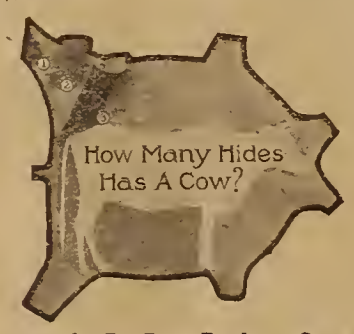

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NUMBER 1

FARM AND FIRESIDE

The National Farm Magazine

JANUARY
1 9 1 8

Photograph by Central News Photo Service Co.

These Canadians, guarded by two Uhlans, are on their way to a German prison camp

Captured by the Germans

By Ivan S. Rossiter

"SAY! Are you going to sleep all day? Where do you think you are? Time for you to go on duty. Someone else wants your share in the dug-out."

So said my chum, "Reddy," one beautiful morning in June. Thus rudely awakened from my dreams, I untied myself from the knot in which I was doubled, removed the sand bags that were wrapped around my feet, and crawled out from the little two-by-four pile of mud known as a "dug-out."

Bailey was out ahead of me, and already the dixie was boiling and the bacon frying. I busied myself, and soon had a pot of porridge boiling. Then from the hole in the wall where we kept the rations we took out the bread and a tin of "plum and apple," and breakfast was served. We both had a hearty meal, and it was well that we did, because it was many a long hour before I had another.

"Gee, it's some morning!" said Bailey. "Wish I was back in Canada."

"Same here," said I.

It was undoubtedly a fine morning. The sky was azure-blue, the sun was shining brightly, and the air was warm. The wood behind was one mass of green.

Our breakfast would have been a very cheerful meal, indeed, but for some unkind German sniper. This enterprising "Boche" evidently believed that the early bird catches the worm. Every once in a while he would take a pot at the edge of our parapet and knock a large helping of sand-bagged Belgium into our breakfast.

The Canadians' Splendid Work at Ypres

"I AM going to teach him better manners," said Bailey. When the dishes were washed and replaced he rigged up the periscope rifle, and commenced to make things interesting for the sniper.

Up to this time everything had been exceptionally quiet. Not a shell had come over the whole morning. This was rather unusual.

Sanctuary Woods, in the Ypres salient, formed the apex of the small but extremely dangerous and costly salient in holding which so many lives on both sides had been lost. Trenches were continually changing hands. The ground was very sandy and loose, and as a result the trenches were very poor. The ones we were holding were not even dug in, but consisted of built-up walls of sand bags, two and three bags thick, which offered little or no protection from shell fire.

The day before these trenches had been receiving unusual attention from the German artillery. In many places the parapet had been breached by the long-range naval guns. That night the boys had been hard at work repairing the damage, and had finished their work just before "stand-to."

Bailey was working hard with his periscope rifle, while I was enjoying a good magazine and a pipe; the other members of the crew had our places in the dug-out, and were trying to get a little sleep.

Suddenly the stillness was broken by an explosion from the German side, a roar overhead, and then in front of our trench rose a cloud of earth, mud, water, and smoke, followed by an ear-splitting concussion. This was the first shell, the herald of what was to come.

Huge Shell Explosions Rock the Ground

THERE was a rush from the dug-out, and the other two boys joined us. They felt a bit peeved at "Heinie" for awakening them so early from their sleep, and were inclined to call him some very harsh names.

"I shall instruct my secretary to send the Kaiser a note if this is to happen much oftener," remarked Wally the corporal.

But it soon ceased to be a joking matter. We gradually realized that this was not an ordinary shelling, but something quite new. Shells were coming from the front, from the right, and from the left. One would smash in the parapet, and immediately afterward another would come from the right and completely demolish what was left of the trench.

The noise was deafening. By half-past nine separate explosions could not be distinguished and it had developed into one continual roar. Trenches were going up in whole sections. The mighty oaks that formed the wood behind were falling fast. Defenses that had taken months to prepare were being smashed in as if they were made of paper.

Above the terrible din of the exploding shells and falling trees could be heard an unusual sound, more terrifying than anything that we had previously heard—the huge naval shells that had been specially massed for the attack. The mighty upheaval of these monsters as they exploded was like an earthquake, and the whole ground trembled and rocked from the concussion. In addition were thousands of trench mortars, known to the troops as "sausages." They had quietly massed thousands of guns, unknown to us, for this attack.

By half-past ten no semblance of a trench remained. Earlier in the game my chum and I had taken up a position around a strong-looking traverse, and this withstood the shell fire a long time. At last a big fellow hit it and we were both buried. We extricated ourselves from this, only to be promptly buried again. We dug out again. [CONTINUED ON PAGE 34]

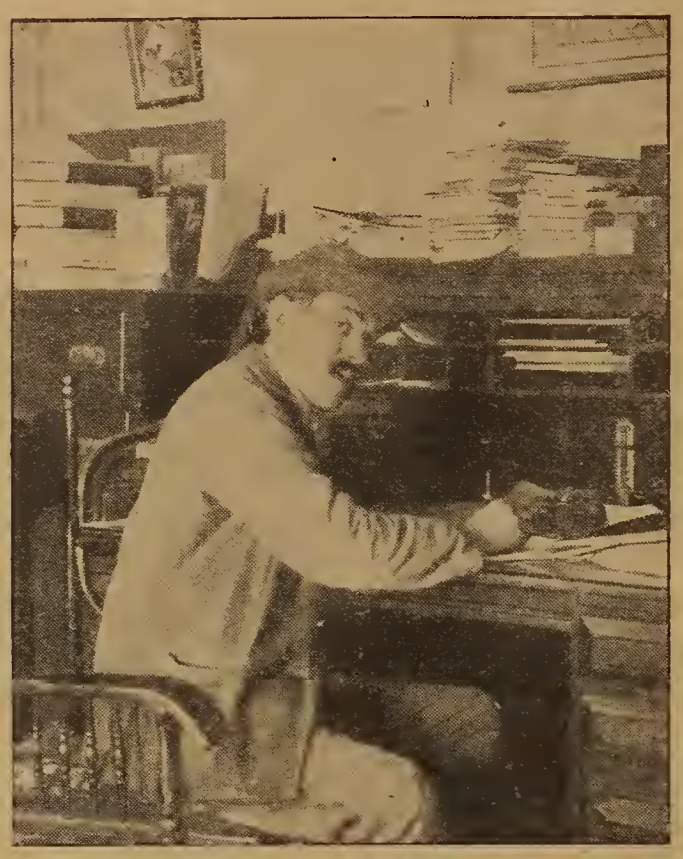
Prosperity Through Planning

If You Advance on Your 1918 Work with a Very Definite Campaign

By D. S. BURCH

STEERING a farm business through the active producing season in these turbulent times is not so different from maneuvering a ship through the danger zones of the great deep, Both undertakings must have every aid of knowledge, skill, and previous planning to avoid encountering disaster. In the case of the farm, while lives may not be at stake, old-time hit-or-miss practices in place of well-planned effective methods may easily change generous prospective profits into an equally heavy balance on the wrong side of the account.

In the season's farming just ahead there is need of more than systematic planning of our regular schedule of farm operations. There should be the fullest possible knowledge of world-wide food conditions and facts about the labor problem, for on these, as well as our individual farm resources, depends America's agricultural prosperity in 1918.



The desk is a big help in working out plans and keeping accounts. It is a business "workbench"

The duration of the war is regarded by many a disturbing factor in planning ahead, but this much is certain: even should the war end in 1918, there would be slight occasion to depart from plans made now on the basis of war until 1920, the commonly expected time of world peace.

The wheat situation in the United States is apparent to all. Congress has guaranteed $2 per bushel for the 1918 crop, and this price will hold whether peace comes or not. By act of Congress the United States Government will pay this price at specified terminal markets for the 1918 wheat harvest until May 1, 1919, and already the acreage of winter wheat is a fourth above that of last year. Should peace come before the crop is marketed the Government stands to lose about $400,000,000, resulting from the bearish influence of the vast stores of wheat in Australia, India, and other foreign countries on the world markets. This foreign wheat cannot be moved now in any large quantity because of lack of ships and the submarine menace. The routes from North America to European ports are at present the safest as well as the shortest.

So, in addition to patriotic reasons, a large wheat crop on every American farm that can grow it represents safe planning because of the guaranteed returns.

The live-stock situation is practically parallel to it, though not as clearly defined officially. While the Government has not definitely guaranteed prices for live stock, plenty of authentic facts have been laid before American farmers fairly and frankly. For the next few years, as never before, we must know what is occurring not only in Europe but in our nation's capital.

Pork Demand Will Continue

"IT IS perfectly plain to me that 1918 will be a great hog year," remarked a breeder visiting in Washington recently, and who raises close to a thousand hogs a year. "But it takes courage for the man who does not see what is ahead to grow more pork when he is feeding such expensive feed."

This is briefly what is ahead: Europe's hog supply has diminished by more than 32,000,000 head since the war. Pork is urgently needed to supply the demand for fats, of which all European nations are short, and 32,000,000 represents about half the number of hogs in the United States. So even should the war end to-morrow, probably a decade will be required fully to satisfy the demand for pork by nearly half a billion meat-and-fat-hungry people who have few hogs of their own and whose meat diet has been restricted for several years past. And each added month of war means that nearly a million more hogs are slaughtered. Immediate requirements outweigh in importance the possible future consequences.

Perhaps this situation on a continent four times as densely populated as our own will help American farmers to appreciate the true significance of the pork shortage, which is not just a market flurry. In a more personal way, however, we know that economical hog production depends on moderate costs for feed, especially corn. When 100 pounds of pork have sold for twelve or more times as much as a bushel of corn, the hog industry of the country has prospered. But in periods when the ratio has been less than 12 to 1 the amount of swine in the country has diminished.

Consequently the Live-Stock Division of the U. S. Food Administration has announced that through its influence on prices of pork products purchased for the Allies, the army and navy, the Red Cross and the Belgian Relief, it will endeavor to stabilize the hog market so that 100 pounds of average live weight of hog will bring at least thirteen times as much as a bushel of corn. The ratio of 13 to 1 means that when corn is worth a dollar a bushel hogs will bring at least $13 a hundred.

A 10 to 1 ratio, some have contended, would have been enough under present conditions, but the Government, which seldom adopts halfway measures, has been liberal.

The beef and mutton situations have not been so fully worked out, but the markets are fundamentally sound. Sheep in the western allied countries have diminished in numbers more than cattle and hogs combined, and those who buy mutton and lamb in retail shops here in America need not be told the home supply is short. Beef, of course, takes longer to produce, and markets more than a year distant are not easy to judge. But experts, who view the situation in the broadest possible light, feel that not for a quarter century after world peace, if ever, will beef prices return to the level prevailing before the war.

Production of forage crops and other animal feeds this year is a matter of judgment, based largely on the probable amount of stock that will be carried. The wisest course will be to sell such crops in the form of meat. An alternative is to study the markets as closely as do the speculators, wholesalers, dealers, and brokers.

Criticism is often made of the Monthly Crop Report of the U. S. Department of Agriculture. It is true that at first this report is rather difficult to interpret in terms of local conditions, but with practice its study becomes profitable.

A good illustration of the benefits of cold figures from official sources is told by a county agent in Washington State. The August 1st Government Crop Report showed him that the State would be short of hay to the extent of 248,000 tons. After this report was issued, dealers began to buy up all available hay for about $13 a ton from farmers who considered the crop above normal. "But," says this county agent in a letter to the U. S. Department of Agriculture, "upon receipt of your estimates I published notices in the local papers to the effect that the hay crops for the State of Washington and the United States would in all probability be short, and almost immediately the selling of hay to dealers stopped. Since that time hay has gone to $20 f. o. b. cars at shipping point."

Neat typewritten letters are clicked off without a household search for pen and ink

Information on labor is undoubtedly the most difficult to secure of any factor entering into the production of farm products. The military draft has upset all previous figures and calculations, and has made the customary methods of getting labor obsolete. This situation, together with a general high wage scale in towns, makes the labor problem look hopeless to farmers.

But there are a few silver linings to the cloud, and perhaps the inventive reader can actually turn them into the precious metal itself. Thus far, only one farmer out of every fourteen of draft age has been taken. This makes one in about forty farmers between the ages of eighteen and sixty, a range which includes most of our able-bodied male farming population. So the present actual labor loss is about 2½ per cent, and increased farming efficiency in excess of this percentage will make up the difference.

Steady Work Attracts Labor

A LABOR expert of national reputation states that the irregularity of farm employment is the main cause compelling workers to seek their livelihood in town. On farms there is a heavy demand for labor in the spring and at harvest; but no widespread consistent demand exists for men to work the year around at a fixed monthly wage. Consequently men of serious inclinations or with families to support seek the steady employment of the city. There are of course other considerations and there is much to be said on both sides of the question. But the statement contains the vital germ of truth, and is as important to employers as to hired men.

It also supports the general experience that more and better machinery, including tractors, is the most practical solution in sight. Farming is, by the laws of nature, a fluctuating business. The demands for labor vary constantly from month to month. Until lately the plan of artificially extending farming activities uniformly throughout the year appeared feasible as a means of equalizing the demand for labor.

The practical answer to the problem seems to lie in a readjustment of man and horse labor. Instead of discharging trained men in the fall and hiring others in the spring (if possible) and keeping idle horses through the winter, good judgment says this: Keep men the year around and use a source of power that is inexpensive to maintain during periods of little or no production. That is, make human labor a year-around permanent factor in our farming plans, thus giving good men the chance that has heretofore existed chiefly in cities. Plenty of farm implements of liberal size, with tractors to haul them, will give the greatest efficiency to such labor in the "peak load" of the busy season's requirements. And during the slack times building operations, home improvements, repairs, and miscellaneous upkeep offer a wider use for human labor than for horse labor.

Feeding horses during months of idleness is not economic, but putting man labor on a twelve-months basis is thoroughly economic and seems the best means of solving the most serious problem of the year we are just entering. The gist of the whole thing is, keep busy and watch the corners, and be it said that farming is a many-cornered business. These wartimes are going to leave their good results. They are going to force us to plan and figure closely, and after the war we will not forget it.

Does it Pay to be Tight with Your Family?

By Ben Bruce

FROM the age of forty-eight a man can look back over a good many mistakes and a good many failures, but the one that stands out the most glaring in my life to-night is my failure as a father.

When I was twenty-eight I was the father of three boys—all handsome, sturdy little fellows—and as I look back to-day I was fond of them, and I think rather proud in a self-satisfied sort of way. We lived on a big farm in northwestern Iowa. I always made the mistake of trying to do too much, and lost out in dollars and cents as well as in numerous other ways. I made this an excuse to myself whenever I started to the field with a—well, a ruffled feeling, I suppose of guilt, way down in the unexplored regions of my conscience, for the thousand and one little acts that had sent those boys hurrying to their mother's arms, where they always seemed sure of a haven or refuge. I never saw her too tired, or too busy, or too sick, to give them her attention and her sympathy.

But I! I was too busy. I had to work too hard. I was too much engrossed with the crop, the hogs that were dying with cholera, the new colt, the fence that was down, the field of corn that was being choked out with weeds before I could possibly get to it, the field of clover hay that I was hurrying to get in before the rain, and—oh, well, something was always rushing. There was no time to listen to Ted's tale of woe, or pat his curly head, and, to be honest, it was against my principle to praise them or to be openly affectionate. Born myself of undemonstrative Yankee parents, work and thrift were the order. With my wife it was different. She was born down close to the Kentucky line, and while she or her people never claimed Southern heritage, yet they had all the characteristics common to the South—impulsiveness and a sensitive nature that hummed to every passing emotion like a taut wire in the winter wind. My harsh, repellent manner sent my boys scurrying to her for sympathy and comfort, and she, being what she was, turned to them with all the intensity of her nature trying to make up to them for the lack of their father's love.

When Carl, the oldest boy, was six years old he would take a little lard pail—I can see him as if it were yesterday—and slip up to a cow in the yard when I was milking and try his hand at making a stream of milk flow into the pail. It wasn't long either until he succeeded. This pleased me hugely, not because of his efforts, or because he was toddling at Daddy's heels, but because it wouldn't be long until he too would be a money-making factor.

I think my eyes began to be dimly opened the summer Carl was ten and his brother eight. My temper, never reliable, hadn't improved as the work increased, and the crops were stricken with hail, floods, and frosts, and my bank account hadn't increased according to my expectations.

When the First Warning Comes

THAT summer my wife had the nerve—we never heard tell of such a thing in our thrifty New England stock!—to get sick. She wasn't really sick, but one day when I and the man went in to dinner I found her lying on the lounge. The meal was all on the table, and there she lay—Carl on one side, his lips quivering, and gently stroking her hand; his brother, less demonstrative, was standing stiff on the other side with the look in his eye of a wounded deer; while Ted was whimpering in the corner.

When I stalked up to her half frightened and wholly indignant at such an unprecedented proceeding, and gruffly demanded what was the matter, she tried to tell me, but only succeeded in gasping for breath; and then it seemed as if every muscle in her body commenced to jump and her teeth to chatter. I was frightened now. Chancing to glance in Carl's direction I was startled for the minute to find him standing with clenched fists and flashing eyes, and a look almost of hatred shooting from their blue depths. A glance at his brother showed the same set look.

There was nothing to do but send for the doctor. I'm ashamed to say, looking back from forty-eight, that the thought uppermost in my mind even then was the draft it would make on my bank account.

The doctor arrived, and quickly said, "Nervous break-down." Did I imagine it, or did he too look at me with a menacing glance? Strange! Wasn't I fast getting to be the most looked-up-to man in the neighborhood? Didn't everybody round about respect me? Why should this doctor look at me like that? Suddenly I felt myself a very much abused man. Surely, it was bad enough to have a woman with nerves, without having your children look at you with such antagonism and a doctor who seemed to hold you responsible for her being in that condition!

It wasn't long until she began to get about again and take up the daily routine, and everything moved like clockwork. I think somewhere down in the depths of me I was proud of my wife. She was a wee mite of a woman, weighing always less than one hundred pounds, but she did all of the cooking, washing, ironing, canning, and cleaning, and raised from a hundred to two hundred chickens every year. But that wasn't anything—didn't my mother always do all of that and raise a big garden besides?

While she went on growing into the lives of those boys, and drawing them to her closer and closer with the cords of love and mutual understanding, I went on redoubling my efforts to make money. But a place was always yawning for a little more; so when a man came out and bought a couple of sheep that I had indifferently given to Carl and his brother when they were little lambs, it seemed only a matter of course to me that I should use that money. It was to make a payment on a machine to build hog fences with, I remember. Their mother explained to them how necessary this was, and I ordered the machine a few days later with a very puffed-up, satisfied feeling, for wasn't this the first one in our neighborhood?

A year later they helped a neighbor pick up potatoes—those little chaps—getting up at five o'clock every morning so as to be in the field by sunrise, and working until sunset.

The boys earned between them, I think, ten dollars. They took some of it and got some little things that they were eager for, very much against my judgment; but their mother gently insisted, and I graciously gave in. In a moment of generosity I offered to sell them a young runty shote for five dollars. Those boys of mine had an eye for money-making, and this afforded me great gratification, for weren't they a chip off the old block? They accepted my offer, handing me their hard-earned five dollars, and the pig was theirs—supposedly.

It was a young sow, and the next spring she had a litter of five baby pigs. The boys were jubilant. Their enthusiasm was contagious, and I really warmed up enough to help them fix a pen under an old apple tree, away from the rest of the bunch. The boys carried slop, pulled purslane, carried corn and bedding, and watched them grow until one day they were ready for market. They were hauled to town with a load of mine, and I was paid for the whole bunch. Those five shotes brought something like fifty dollars at that time. I pocketed the money. What did it matter—wasn't I working for them; wouldn't they get it all some time? So I reasoned with my conscience.

Things went on until they reached the age of sixteen and seventeen. Work was the watchword; recreation the devil's tool. Those boys didn't take to the farm. To me they were sullen and secretive, though often I would surprise them and their mother holding the chummiest kinds of consultations, and they were always open and frank with her.

Finally, one day, they declared their intention of going to work in town. This I loudly opposed, but to my consternation their mother quietly acquiesced in their decision. It was the first time she had ever openly decided against me. I was furous. They had both, unknown to me, secured positions in our home town, only two miles from the farm.

An Outsider in His Own Family

TIME went on. The boys were making good. I had seen their bank books. But I found myself in the position of an outsider in my own family. Things had been made to run as smoothly as possible—a big task to their mother. The boys went their way and I went mine, yet I felt abused, ill treated.

The realization that I was an outsider sent a sharp stab through me

I had my first real awakening one morning when Carl was nineteen. I chanced to come in before he had gone to work, and found him strutting up and down before the mirror in an overcoat that spelled the latest thing in sportiness, while his mother looked on with an amused sparkle in her eye and a girlish flush on her cheeks. They had been laughing a moment before. I had heard them as I stepped into the hall. Yet the moment I entered, a quick glance passed between them.

The realization that I was an outsider, and a vague consciousness that it was my own fault, sent a sharp stab through me. Carl hastily kissed his mother and went out. I turned on my wife, and in a voice of thunder angrily demanded what the idiot had paid for that thing. To my astonishment she turned quickly and faced me. "Twenty-five dollars," she said. I swore, and started to stalk out of the house. "It may be your way," I thundered back at her, "but it ain't my way," and started to slam the door.

It was with something of a jolt that I suddenly found this meek little woman of mine blocking the way, with an unknown flash in her eyes. "Well, suppose it isn't your way! Suppose it happens to be my way, what then?" I stared at her in amazement and once more started to pass out, but still she blocked my way as she hurled these words at me: "You think Carl ought not to have put that much money in his overcoat. You think he should have put it in the bank. You don't see that he is growing impatient and restive, and some of these days he's going to kick over the traces entirely. He wanted that particular coat, and he talked it over with me; and I decided it was best, for many reasons, for him to have it, and incidentally I decided that there was no good reason for supposing that my way might not be just as good as yours."

It certainly was an eye-opener for me, and somewhere, deep down inside of me, was a terribly lonely, empty feeling. In a dazed condition I went about my work. At noon I went in to dinner, half expecting I knew not what, but found the meal on the table as usual and all traces of the storm seemingly gone from my wife's face as she looked up with her usual smile.

Four years have passed since then. Those boys have made good, each in his separate line of work, and I am called successful.

Last night I returned at a late hour after a week's absence. There was a bright light in the big living-room and I heard my wife's laugh ring out as clear as a girl's. I opened the door quietly and looked in. It was a scene to gladden a man's heart, only there was a heartache behind the gladness. Some pine cones had been thrown on an already cheery blaze in the open fireplace, and the [CONTINUED ON PAGE 34]

When You Build Your House

By William F. Miller

BUILDING a house is a decidedly important time in our lives. There are so many things to plan and decide. There are so many places where one may go wrong. Little refinements and comforts may be forgotten, and so many times one does not get full value for his money if he is not wise in building knowledge. A mistake in building endures when other mistakes are not remembered. It is, however, a fascinating work to plan a house that will be comfortable and attractive, to build it just as you want it to be, with everything included at a reasonable price.

I have drawn the plans of a house that can be built for $3,500 at the present prices. It has seven rooms, including a bath, china and linen closets, two big fireplaces, a built-in buffet, a sleeping porch, and a back stairs, so that the men-folks can slip in the back way when they want to go up-stairs and tidy up for company. I have planned the dimensions so that the lumber will cut to an advantage, and so that the rooms will be easy to paper and carpet.

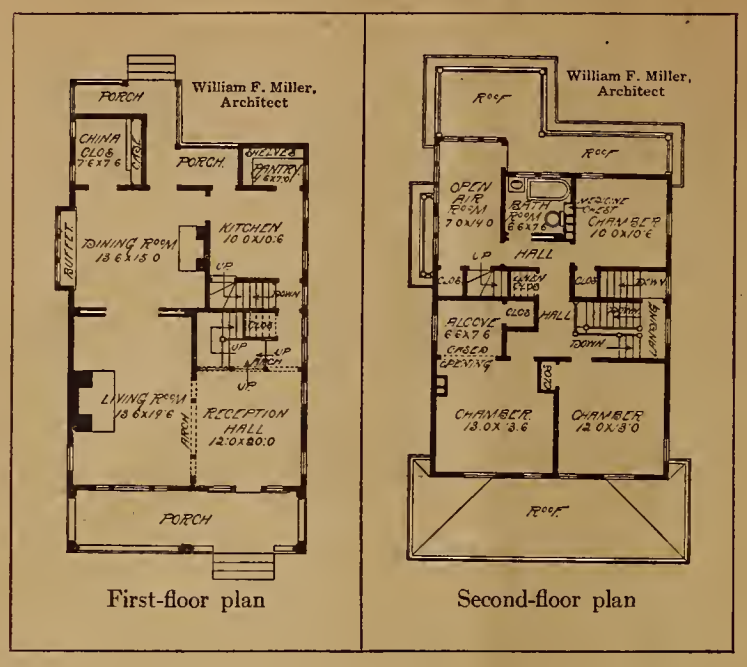
The main body of the building is shown in the illustration, without the china closet and porch in the rear. Care is taken to keep down the sizes of the rooms so that the joists, 14 feet long, will work out and not waste any material. Then the height of the first story is made 9 feet 6 inches and the height of the second story 8 feet, in order to use studding 18 feet long and not waste any material there.

The roof construction is designed light because the covering is to be of shingles. The rafters are 2x4 inches and spaced 16 inches from center to center. There is a cellar under the kitchen and dining-room. The floor is cemented.

The front porch is 7 feet wide. It is made that width purposely, so porch flooring 14 feet long will cut to make lengths without any waste.

Upon entering the reception hall you can go directly to the kitchen without passing through the living-room and dining-room. A staircase, novel in plan, takes up one end of the reception hall. In front of the stairs is an arch which makes a very pleasing effect; it is different from the customary open stairs usually planned in a moderate-cost house. There is a spacious closet. A closet on the first floor is a convenience that should not be neglected.

From the reception hall you enter the living-room through an attractive arch. This is similar in design to the arch in front of the stairs, and you are greeted by a large fireplace, 7 feet wide, in the living-room. It is sufficiently large for a roaring fire, where the cracking of burning wood on a bleak winter's night may be enjoyed.



First-floor plan — Second-floor plan

Built-in Buffet in Dining-Room

THE dining-room is connected with the living-room by double sliding doors. At the right side is a fireplace of ordinary size. In the other end of the dining-room is a built-in buffet in a bay window. To the rear of the dining-room is a large china closet. That space contains a case which occupies the entire length of the room. It is 9 feet 6 inches high.

To the right of the dining-room is the kitchen. It was purposely planned small. The object was to save the woman of the house as many steps as possible. At the rear of the kitchen is a commodious pantry where most of the things are stored that would be seen in the kitchen if it were larger. The rear porch covers the kitchen entrance, the exterior door leading to the dining-room, and the far end of the china closet. The parts consisting of the pantry, rear porch, and the china closet are one story high.

The second floor is reached in two ways: by the rear stairs leading from the kitchen, and the main stairs leading from the reception hall. There is a common landing for both, but the rear stairs may be shut off from the landing with a door. By means of this door and the door at the lower end of the stairs in the kitchen, the odor from the cooking cannot reach the second floor.

All chambers, the open-air room, and the bathroom can be entered from the hall. Each bedroom has an ample closet, which is a necessary adjunct to any well-arranged house. The chamber above the living-room has an alcove in connection with it. This space is divided from the main room with a cased opening. By hanging portières on the opening the alcove could be converted into a child's room.

A linen closet is located as centrally as possible for convenience to the different chambers, and it is close to the bathroom. The open-air room has windows on two sides. On the remaining side is a door which leads to the roof over the one-story addition in the rear. The sashes of the windows in the open-air room are hung to slide up and down, so the space can be utilized for a sewing-room or for any other purpose to meet the requirements of the occupants. An excellent place to air bedclothes is on the roof, which can be easily reached from the open-air room.

A bathroom, practically square in shape, is entered from the hall by means of a sliding door. An ordinary door requires just so much space in swinging, so the sliding door was decided upon with that thought in view.

Both the first and second stories are floored with standard hard-pine flooring of a good quality. The attic flooring is a cheaper grade, but it is, like all the other flooring in the house, tongued and grooved. Hard pine is the finish for the entire house, except in the bathroom. There the woodwork is poplar, and it is finished in white enamel.

The plastering is white-coat work, so the walls and ceiling can be papered. However, the last coat of plastering could have been sand finish without any additional cost.

In the event that more sleeping-rooms are required in the future, the roof is constructed for remodeling the attic. There is a dormer window in the front and on each side of the house, making it possible to plan for three additional rooms. The cost of changing the attic to have the additional rooms ought not to exceed $300.

In working out the preliminary ideas I have kept in mind compactness of plan and the best results for the least expenditure of money. Doors are used from stock sizes, so as not to increase the cost by the employment of designs made especially. Wherever it is possible sashes and glass are selected from stock patterns. The appearance of the exterior is not buried in the zeal to economize. The main roof projects four feet beyond the walls. This is an excellent feature both as a protection from leaking gutters and as shade from the hot, burning sun. A double row of dentils was run under the overhanging roof for ornamentation. The hanging gutters are molded galvanized iron, and they have the appearance of hidden gutters. Green stain is applied to the shingles on all the roofs. The body of the house is painted a light gray and the trimmings are touched up with white except the front-porch railings. This is built of shingles on both sides and stained green to match the roof. An inviting entrance greets one ascending the front-porch steps. It contains a door with side lights, and the entire design is oak stained dark and then varnished. Unique porch columns support the roof of the main porch. They are constructed of square posts paneled and then half-round columns secured to them. The idea is to break away from the trite and cheap porch columns and yet have something attractive but not expensive. That part of the foundation showing above the ground is a good grade of rubble masonry with a rock face, pointed with round joints of cement mortar. The exterior walls are sheathed with tongued and grooved boards, covered with heavy building paper, and then lap siding 6 inches wide, with 4¾ inches exposed to the weather, is used as weather boards.

How the Cost May be Cut $200

ANOTHER place where the total cost can be reduced at least $200 is in the rear of the house. The china closet and a part of the rear porch can be omitted, leaving the pantry and 6 feet of the porch remain.

If frugality is considered above external appearance, an additional $50 could be saved by not staining the shingles on the roofs. However, that would be poor economy, as the stain adds materially to the general color scheme and it is also a good preservative.

The dwelling contains a complete hot and cold soft-water bath, and a sink in the kitchen, equipped with hot and cold water. It is wired for electric lights, the knob and tube construction being employed. The installation of switches is eliminated wherever possible to keep down the cost, and most of the lights are controlled directly at the fixtures. A hot-air furnace is installed for general heat, and all rooms are provided with registers.

In constructing the house it is well to take into serious consideration whether or not the attic will ever be remodeled for the additional rooms. If so, have the hot-air pipes set in the walls. Then it will not necessitate the rearrangement of the unsightly stacks.

Hereafter when the general contract is mentioned it will consist of the excavation, masonry, brickwork, galvanized iron, tin work, painting, glazing, glass, plastering, and carpenter work. The mill work, carpenter labor, and the rough lumber are included in the carpenter work. To the general contract must be added the lighting fixtures, wiring, mantels, hardware trimmings, heating, and plumbing.

The following prices are the amounts of the different contracts: General contract, $2,615; plumbing, $450; heating, $160; hardware trimmings, $45; mantels, $125; wiring, $45; lighting fixtures, $60; total, $3,500.

This cost is for the house built under the present condition of abnormal prices. If the $250 is deducted for the changes indicated, it will reduce the amount to $3,250.

This attractive seven-room house can be built for $3,500 at present prices

Borrowing Money from Uncle Sam

By Frank R. Wilson

FINANCING the farmers of the United States adequately and promptly is a bigger job than even the framers of the Federal Farm Loan Act dreamed.

Despite the fact that the Federal Farm Loan Board, composed of Secretary of Treasury McAdoo, W. S. A. Smith, George W. Norris, Charles E. Lobdell, and Herbert Quick, through the twelve federal land banks, is dispensing practically $2,000,000 per week to the farmers in the United States in long time five and one-half per cent loans on first mortgages, thousands and thousands of other farmers are clamoring for additional loans. Until last month the interest rate was only five per cent.

When a crowd gathers in front of a theater seeking admission and there is but one ticket window, it is required to stand in line. Something like that is just what the farmers of the United States are doing now, and some of them are manifesting considerable impatience in spite of the fact that, considering the length of time they have been in operation, the federal land banks have achieved wonderful things.

The Federal Farm Loan Act became a law in October, 1916. The federal land banks were not organized until the following spring, and were not in position to make loans until the early part of the summer of 1917. As soon as the act became a law, thousands of farmers all over the United States began organizing farm loan associations, and long before the federal land banks were organized, their officers selected, appraisers chosen, and other necessary details arranged, these farm loan associations were all ready for business. By the time the banks were ready to open, a volume of business had accumulated which required many months to dispose of. This situation will never arise again. Every association seemed to demand that it be the first served, which of course was impossible, and the result has been considerable criticism on the part of those compelled to wait. Their anxiety was increased because many of them wished to borrow for the purpose of paying off indebtedness coming due on a certain date, and if they were unable to get their loans by that date they would be compelled, in many cases, to accept the terms of the private money lenders, paying the usual commissions and a higher interest rate than had been established by the land banks.

Notwithstanding the necessary delays, the federal land banks have been doing business at a remarkable rate. Despite the multitude of obstacles which had to be surmounted in creation of a new system, these twelve federal land banks had, up to November 1, 1917, chartered over 1,600 farm loan associations, which had applied for practically $70,000,000 of loans. There were, in addition to these associations already chartered, about 1,600 additional associations already organized, awaiting action by the federal land banks, and the twelve banks estimated that there were approximately 2,200 other associations in process of formation.

The amount of money actually paid out to farmers up to November 1, 1917, was $21,040,000, and the amount of farm loan bonds amounted to $21,500,000.

Some time always elapses between the time when the golden grain enters the self-feeder of a threshing machine and the straw emerges from the blower. Just so with the federal farm loan business. The difference between the amount of loans approved and the amount of loans actually paid out indicates the normal volume of business required to fill the big federal farm loan machine.

Of course, during the first few months of operation the business of the federal land banks was to consume enough of the waiting business to fill its machinery. Not until the fall of 1917 did the product begin to emerge from the machine. Now the closed loans are being turned out almost as rapidly as loans are being approved by the federal land banks.

The great problem of the Federal Farm Loan Board is to shorten the route through the machine. It must be remembered that it was a new machine, untried before it was put into actual operation, and subject to a great many improvements which the Federal Farm Loan Board and the twelve federal land banks are now putting into it. It is probable that it may be necessary to go to Congress for some amendments which will make the law meet obstacles not foreseen before it was put into operation.

The burden of the complaints made by prospective borrowers may be divided into two classes: first, criticism over the delay in getting appraisals and getting loans closed; and second, criticism of the valuations permitted by the Farm Loan Board.

Let us consider some of the criticisms having to do with the delay in closing loans and see whether or not the blame all belongs to the federal land banks.

The principal reasons for delays in closing loans may be listed as follows:

Incorrectly and inaccurately filling out application blanks on the part of borrowers.

Slowness of borrowers in procuring abstracts of title.

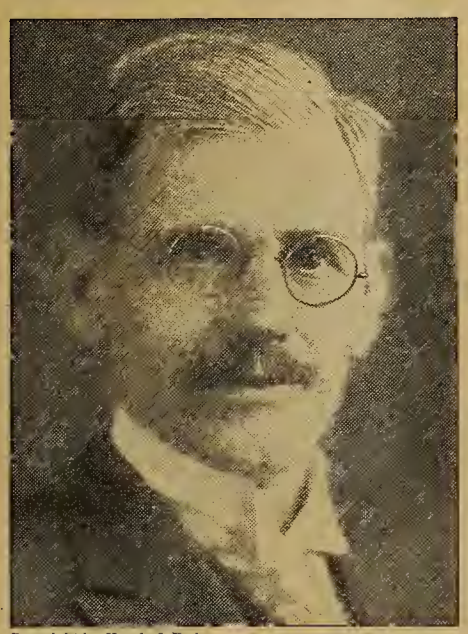
Slowness on the part of borrowers in curing defects in title after they are pointed out by the federal land bank.

Procuring the assent of borrowers to take reduced loans after the federal land banks have appraised the lands.

Failure of private money lenders and banks to release unexpired mortgages against lands whose owners are trying to transfer their mortgages to federal land banks.

Shortage of capital on the part of federal land banks.

A tremendous volume of accumulated business waiting for action.



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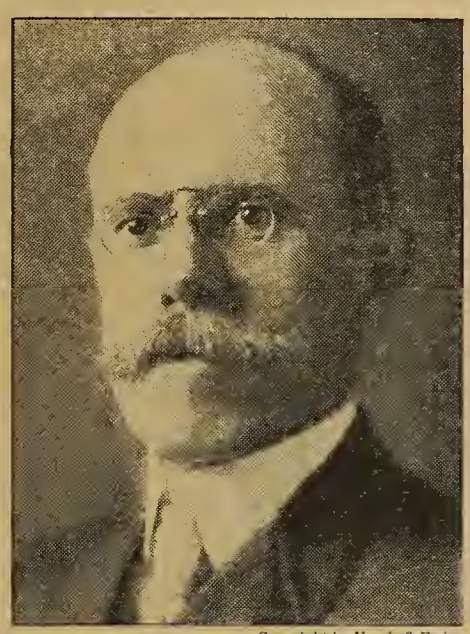

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Herbert Quick

It will be observed on investigation of these causes of delay that most of them have to do with the borrowers themselves and their attorneys and abstracters, and not with the federal land banks. It is the business of the borrower to fill out his application blank correctly and accurately in the first place, giving just such information as is needed to give a correct understanding of his security and his business. It is the business of the borrower to produce an abstract of title. It is the business of the borrower to have cured defects in his title after they are pointed out. It is the business of the borrower to give quick assent or refusal to a proposal to reduce his loan to accommodate a conservative appraisal.

The great volume of business which has overwhelmed the federal land banks and the shortage of capital provided in the act are things which cannot be helped at present. The federal land banks are gradually wearing down this accumulated volume of business, and it will be up to Congress to provide greater capacity for these federal land banks if it shall be found necessary.

Many people who are borrowing under the Federal Farm Loan Act have borrowed only from neighbors or from local money lenders who had associated these owners with their lands for many years and were willing to take a chance on making them loans without abstracts of title. The federal land banks have put all of this business on an impersonal basis, and require from every borrower an abstract of title which insures his ownership of the land mortgaged.

As a matter of fact, the whole stability and success of the federal farm loan system depend upon the value of farm loan bonds. If investors of the United States will purchase farm loan bonds freely, there will always be a ready flow of money to the twelve federal land banks and this money will be available to the farmers at a low rate of interest. If there is doubt about the value of securities issued under the farm loan system, investors will exact a higher rate of interest and manifest greater timidity in the purchase of these bonds, jeopardizing the steady supply of money to finance the farmers and resulting in a higher rate of interest to the farmers.

Many borrowers have complained that they were not able to get any larger loan under the Federal Farm Loan Act than they had been able to get from a private money lender. They have indicated disappointment in the lack of generosity on the part of the Farm Loan Board and its appraisers. The trouble was that they got a wrong conception of the Federal Farm Loan Act. Overzealous friends of the system had perhaps given them the impression that this was a big grab bag in which the farmer borrowers of the United States would d[illegible] tal for use in t[illegible] business. As [illegible] federal farm l[illegible] ly business pr[illegible] vides the far[illegible] money at cos[illegible] The average [illegible] satisfied to ge[illegible] as he used to [illegible] tem, at one or two or three or four per cent less interest, and on such favorable terms of repayment as to enable him to turn the mortgage from a liability into an asset.

"The proof of the pudding is in the eating." There are plenty of indications that farmers who have borrowed under the Federal Farm Loan Act are more than satisfied with their bargain. One farm loan association in Montana which started with $75,000 of loans suddenly grew to $300,000 of loans as soon as the charter members procured their loans. A great many timid farmers in the community who had doubted the efficacy of the Federal Farm Loan Act were glad to get into the "band wagon" as soon as they saw it could deliver the goods. That is the case all over the United States. The average volume of loans of farm loan associations at the time they are chartered has been $44,000 each for the first 1,500 farm loan associations organized. In practically every case when these charter members have procured their loans, enough additional applications have been received to multiply the total almost by twelve. The total applications on hand reported by the twelve federal land banks on November 1, 1917, was $193,250,945. If this expands, as there is every reason to believe it will, from the history of associations already chartered, it is apparent that the federal farm loan system is confronted with a gigantic volume of business.

One of the most hopeful things about the future of the Federal Farm Loan Act is the readiness with which the bonds already issued have been sold. In spite of the Liberty Loan financing, which has made it impossible for the Federal Farm Loan Board to go before the people with these bonds in a vigorous selling campaign, the amount of bonds sold up to November 1st was $21,500,000. The sale of these bonds became possible by an arrangement made between the Federal Farm Loan Board and several of the leading bond houses. Without such an arrangement it is doubtful if, in view of the [CONTINUED ON PAGE 24]

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Uncle Sam's Banks Busy

UNCLE SAM has already loaned the farmers of America something like $40,000,000, since his new land banks opened for business. He is loaning this money on easy terms: 5½ per cent interest, no commission charges, loans to run from 5 to 40 years, and the principal to be repaid on installments along with the interest, so that, in reality, the mortgage never comes due.

The law is encumbered with an unnecessary amount of red tape. Perhaps that is inevitable. But with the passing of a few years this red tape should be cut away; Uncle Sam should put no obstacles in the pathway of the hard-working, frugal farmer who desires additional capital with which to buy more land, more stock, or more machinery, or to build himself a better house.

The secretary of one of these federal land banks has kept track of the loans already made. He reports that one fourth of the money Uncle Sam is loaning farmers of his district is for the very laudable purpose of erecting new houses and better outbuildings. Surely, there should be every assistance possible given to carry on such a campaign.

It is only a few weeks until the first of March, when most farm paper is payable or renewable. Why not look into this new system of farm borrowing and see if it will not save money, in commission and interest, and take away the bugbear of a mortgage which falls due on a certain date, perhaps at the very time when crops are a disappointment and ready money a scarcity?

Need Fixed Prices for All

IF IN wartime the prices of the necessities of life were permitted to rise and fall as the law of supply and demand or the control by speculators dictated, the ordinary business of the country would be paralyzed. The price of steel and of lumber would go so high as to make all building except government construction prohibitive. The price of bread would rise to such a point that only the wealthy could buy it.

This cannot be permitted. Prices must be stabilized, and the only way they can be stabilized is by government action. In stabilizing prices the Government has a twofold responsibility—to hold prices down sufficiently to enable business to go on with the least possible interruption, and at the same time to keep prices up to where sufficient production will be assured.

In stabilizing prices and thus stopping fluctuation, destructive speculation is eliminated. For example, certain jobbers of groceries bought enormous quantities of canned goods a year and a half ago for speculative purposes. When the Government fixed the permissible profit over the original cost of the goods at 12½ per cent, the speculative inflation vanished and the jobber lost an unearned profit of $1,200 to $2,000 a car. The next day this was reflected in the price of canned goods in retail stores.

Obviously, if price-fixing is to be equitable it must apply to all products equally. The farmer's wheat, his live stock, his dairy products, and other articles which he has for sale must not be depressed in price beyond that of the things he buys, such as farm machinery, fertilizer, building materials, feed for his animals, food for himself and family, fuel, and the like.

The price of what the farmer buys should be the subject of as thorough and intelligent regulation as the price of what he sells. The farmer will be satisfied with the regulation of the price of his products if the elements which enter into their production and into the cost of living are likewise regulated.

This is a big task and a new task for the United States. It is too much to expect that it shall be accomplished perfectly at the start. Conditions will constantly improve, however. Common sense and justice are the two essentials in price-fixing, and the United States is a nation that can be trusted to supply both.

Let the Scrap Iron Help

SCRAP IRON was never worth so much as it is today. Why not gather it up and sell it? There's many a discarded implement, rusting away in shed or field corner, which will bring in the dollars; and, what is even more important, Uncle Sam needs iron, just as he needs men and money.

Next to railroad construction, in normal times, the farms of America take the greater part of the steel and iron produced in this country, about $165,000,000 annually in implements and tools for the fields alone. If the ratio of increase between 1900 and 1910—the time of the last federal census—has been maintained since, there is something like two billion dollars' worth of machinery on the farms of America. A part of this can be "scrapped" easily, for there are many fields in which discarded rakes and binders, plows and harrows, are rusting their old life away. If you pick them up, haul them to town, and sell them to the junk man, it will be well worth your while.

The authorities at Washington are appealing to you to do this on patriotic grounds. Rusting and abandoned farm machinery is almost always a sign of shiftlessness approaching criminal carelessness. It is never too late to repent, however. If you go out into the fields, drag the old piece of iron from the earth and débris which encumber it, and take it to town, it will increase your bank account and help Uncle Sam. Who knows but that the old, discarded mower may in time become a railroad rail or the great gun which will force the Boches to admit that the world is safe for democracy forevermore?

Twenty Years Ago—and Now

A COUNTY-SEAT newspaper in the Middle West prints an interesting list of the changes the last twenty years have brought in our everyday life. We quote a few at random:

"Twenty years ago but few had seen a silo, nobody sprayed orchards, cream was five cents a pint, automobiles were a curiosity, the butcher 'threw in' a chunk of liver, strawstacks were burned instead of baled, farmers came to town for their mail, nobody 'listened in' on a telephone, milk shake was the favorite drink, you stuck tubes in your ears to hear a phonograph and paid a dime for the experience.

"To-day there are 65,000 silos in Wisconsin alone, which State ranks first in the number and value of dairy cattle. To-day the farmers and orchardists know not only that they can increase their yield and profit by spraying, but that they must spray if good fruit is to be expected. To-day cream sells for anywhere from 15 to 25 cents a pint in town, while the butcher would no more throw in a chunk of liver, or even a piece of 'dog meat,' than he would sell ten-dollar gold pieces for a dime.

"To-day there are few sections where the rural-delivery service is not known, and when the farmer comes to town it is not for his mail but to attend the meeting of the bank stockholders, of whom he is one, or to haul in a load of $2 wheat and $1.50 corn. To-day there are more than four million automobiles running over the highways and byways of the land.

"To-day the talking machine is to be found in the living-room of thousands of farmhouses and the old-style rubber tube attachment has disappeared. To-day the farmer who burns his straw is ostracized by his progressive neighbors. They may still 'listen in' on the party-line telephones, but a bright genius has already patented a devise which even makes this impossible from now on."

With so many things changed in the last twenty years, who can say for sure whether we may not be planting corn with airplanes and tiling wet fields with submarines twenty years from now?

Making Safe Investments

WINTER is the time when we have the most leisure for reading and for listening to salesmen who call. Promoters realize this, and during the present season every one of us will have opportunity to invest in enterprises of all sorts. Some of them will be good; most of them will be bad.

It is worth while to keep constantly in mind the three big essentials of safe, reliable investments: (1) That there be no danger of losing the principal; (2) that the stock be such as can be disposed of promptly and readily if necessary; (3) that a fair rate of interest be paid, and paid regularly. Any enterprise that does not meet these requirements is not a real investment; it is a gamble, and gambling cannot be profitably mixed up with investing.

None of us can tell by listening to a salesman or reading a circular whether an enterprise comes in the class of safe investments or not. Any good banker, however, can readily obtain the necessary information, and he is willing to do it for any of his customers. A bank is not simply a place for depositing money: it is a place for procuring all sorts of financial information. Your banker is making a profit from your deposits. Why not let him earn it by a little special service?

No One Lives to Himself

SOME good things have already come out of the war. Not the least of these is the better understanding that has come between men of all classes. Time was when it was the fashion of the city man to talk about the farm man as if he did not amount to much. Now everybody knows that the farmer is, and always has been, a good citizen, a man the world cannot get along without. That ends the petty disposition some people once had to laugh at the country man, and the world is the better for it.

The sooner we all recognize that none of us lives to himself alone, but that we are all closely linked together by the bonds of a great common good, the better it will be for humanity. The farmer can do better work if he feels that his neighbors of the city are appreciating his worth and the value of what he is doing. We all like to feel that we are held in esteem by our fellows.

In just the same way it helps the city man to know that he has the confidence of the farm man. He is glad that the farmer trusts him to do the right thing. The commission man will work hard to make a good sale of the produce that has been sent to him to dispose of if he thinks, "Now, that man back there on the farm expects me to do my level best for him; I will do it."

And then, the nation in which all men, of whatever condition in life, are working and thinking and planning along the same right lines is a much stronger nation than the one where the citizens are, if not antagonistic, at least indifferent to each other's best good. This being so, we hail with joy the tendency to get closer together, to stand shoulder to shoulder in everything that relates to the health, wealth, and happiness of the world. And this is a thing at which we may all do something. The time to do it is now.

The Value of Insurance

FOR several years we have urged you to carry insurance on your buildings and live stock and to make all reasonable preparations to fight fires.

The story of the million-dollar stockyards fire in Kansas City last fall carries a lesson which no one can afford to overlook.

Following a rather disastrous fire at the same yards three years ago, the Kansas City Live Stock Exchange voted to carry a blanket policy on all live stock received. A large fire-insurance company took the risk at 10 cents a carload. Unless otherwise instructed by the shipper, this small amount was deducted from the returns on each car, and turned over to the insurance company.

The company, it is stated, agreed to pay full value for all animals lost, up to $150 per head. The insurance continues as long as the cattle are in the yards. The small charge was such as to be felt by nobody, but it meant a million to the men whose stock was in the big fire. It is estimated that 11,500 cattle and 2,500 hogs were burned.

Could there be a more striking example of the value of insurance?

I Put Millions in Farmers' Pockets—Is Yours Ready?

—Wm. Galloway

This is the result of my factory-to-farm saving plan. That's how I divide the melon. I make the better grade farm implements in my immense factories at Waterloo, Iowa, and sell them right off the factory floor at the lowest manufacturer's price. All waste is prevented. I **invite comparison** of the same quality goods and **defy anyone to meet my prices.** Buy your Cream Separator, Manure Spreader, Gasoline Engine or Farm Tractor **the Direct Way**—the Galloway way—and get your share of this big million dollar saving.

Foodwill Win the War Don't Waste It

SEPARATORS

Four Good Sizes at Four Low Prices

My new Sanitary model is positively the most popular separator in America today because of its perfect skimming, its sanitary features, its scientific design, perfect construction, its ease of operation and **low price.** Bowl runs in true and perfect alignment, which insures perfect skimming all the time, because it is supported by one casting, the gear case, into which the gear shaft and both spindle bearings are built. Every external part is rounded so there are no sharp corners to gather dirt and grease. Bowl discs separate from each other for washing. All working parts run in constant spray of oil. No sharp edges or corners in the bowl to break up butter fat globules. Every drop of milk gets the full skimming force of the bowl—the milk so distributed that each disc gets full share to skim. No flooding at top of bowl and no cross currents to disturb bottom. Skimming capacities exact. Test it for 90 days—180 milkings—then decide.

SPREADERS

Steel Beater V-Rake

Low-Down—Only 42 Inches High

Don't buy a spreader of any make or kind until you have tried a genuine Galloway 1918 model No. 8, No. 5, or No. 1A, or a spreader box (which will fit any farm truck): Wide-spreading V-Rake, worth $15 extra, costs you nothing. Invincible, patented roller feed—an exclusive Galloway feature—one of the secrets of its light draft—alone worth $25—costs nothing extra. Patented automatic stop, uniform clean-out push-board, worth $10 extra, costs nothing extra. All wheels under the load. Short turn. All steel beater—cannot twist or warp. Read my book. It tells how a Galloway spreader will pay for itself. I will also send free my famous book, "A Streak of Gold." Write—Use Coupon.

DIRECT FROM THE FACTORY!

MY PLAN SAVES YOU MONEY!

Nineteen years ago I started selling direct from the factory and saving the waste between maker and consumer. My new 1918 Book tells you the whole story—how I happened to operate on the saving plan—make my own goods and sell them direct from the factory, giving you farmers the benefit of this great saving. You know Galloway. But some of you have never bought from me. Your neighbor has bought from me and is satisfied. Why lose your share of this saving by failing to take advantage of my money-saving plan? Saving money is earning money. Economy is wealth. I will prove to you that Galloway goods are right—that Galloway prices are right. Start now on the way to the greater cash savings.

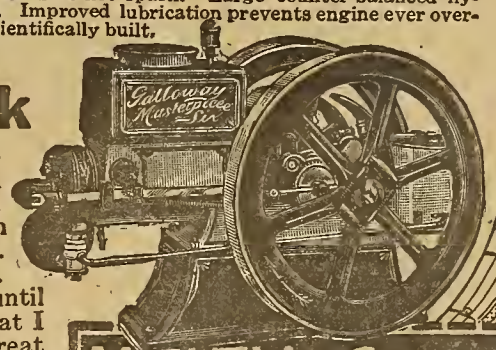
Pocket These Savings—Add to Your 1918 Profits

Don't let anybody fool you. Don't let anybody talk you out of buying from Galloway. Take nobody's word but your own. Send for my book. Read how I am making a million dollar drive in savings for you farmers of America and how you can pocket your share when you buy direct from my factory. Send me one order. It will convince you that Galloway goods are right, that Galloway prices are right—that they have directly and indirectly saved millions of dollars for farmers of America, proving that Galloway **Divides the Melon** with his customers on Spreaders, Separators, Engines, Tractors, and other farm implements.

ENGINES

KEROSENE or GASOLINE
1¾ H. P. to 16 H. P.

The Galloway improved gasoline or kerosene engines for 1918 are the **best I ever built.** All sizes, from 1¾ h. p. to 16 h. p. moguls, stationary and portable. Adjustable bearings. New model 1918 Economy Carburetor that cuts down fuel bills; simple, positive air valve adjustment makes easy starting, mixes perfect fuel charge, makes gasoline ideal fuel—worth $15 more—costs nothing extra. Exhaust and intake valves in the head line highest class automobile engines. Double ball governor—never sticks—regulates speed perfectly. Arch of strength, water-cooled cylinder head absolutely gas tight with end of cylinder. One-piece cylinder and base on all Galloway Engines from 4 to 16 h. p. insures perfect alignment of parts and uniformity of wear. Make and break igniter—never misses fire. Webster magneto supplies blue-hot spark. Large counter-balanced flywheels. Water pot and cylinder frost-proof. Improved lubrication prevents engine ever overheating. Galloway engines honestly rated, scientifically built.



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When you read my story you will know the Galloway institution and policies. My book tells the story of the Galloway business since I started nineteen years ago. This book is not merely a catalog, but a helpful farm guide that shows you new ways to get the most out of your farm and make it yield utmost profits. Now, I want you to have this book. Tell me what implement you are interested in and expect soon to buy. Throw off your old habits of prejudice and hold off buying anything until you get the book. My catalog is my only salesman. It explains what I mean by "Dividing the Melon" and how you get your share of this great million dollar saving. To save you on freight I have established a warehouse near you and can ship from Council Bluffs, Chicago, Kansas City, and St. Paul, besides from my factories at Waterloo. Send today.

Use the coupon, or drop a postal or send a letter, but write.

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Mark a Circle

around the implement you want special information about.

This is Important

because it means you will get the exact information you want.

Aeroplane view of the Great Galloway Chain of Factories at Waterloo, Iowa, U. S. A., where Galloway Manure Spreaders, Gasoline Engines, Cream Separators, Tractors, are built and sold direct from factory-to-farm.

Wartime, a lonely island, a U-boat destroyer, and a girl make

In the Spy Net

A Fascinating Tale. This is the First of Four Thrilling Installments

By
EMEL PARKER

EARLY one morning in late summer a terrific hurricane swept inland from the Georgia coast, across the islands that fringed the shore toward the bay.

The wind wrapped itself around a large dwelling which stood in the center of one of these islands. The house trembled, doors slammed, windows rattled, and thunder boomed; and within the house a vivid flash of lightning revealed the figure of a girl who could not have been over twenty-five, kneeling in front of a brick fireplace, endeavoring with steady hands to kindle a blaze.

Suddenly she sprang to her feet, thoroughly startled. Through the house there reverberated the sound of the bell attached to the big front door.

This door was never used by the negroes, who, living a mile or more from the Big House, as her home was called, were the only other inhabitants of the island. Surely no human being could have crossed the bay from the village in such a frightful storm. A feeling of terror came over her.

The bell pealed again.

Realizing that her servants were too frightened by the storm to stir from their corner by the kitchen stove, the girl, notwithstanding her apprehension, went into the hall.

She unbolted the heavy door and flung it open. In the darkness she could see the tall figure of a man.

"Won't you come in?" she said.

"Thank you," replied the stranger, between chattering teeth.

As he entered the hall a flash of lightning revealed a white, thin face above a turned-up, soaking-wet coat collar.

"You must be terribly chilled!" she exclaimed, all other emotions momentarily supplanted by his evident suffering.

"I am," he answered. "I was so glad to find a house."

"You must come in to the fire and get warm."

He looked down at the pools of water dripping from his clothes. "My muddy shoes will ruin your rugs."

"Nonsense! Come in here at once!"

He followed her to the fireplace, where the red pine now made a bright warm blaze.

Having lighted a lamp, she looked at him again. He was leaning against the mantel, apparently scrutinizing every detail of the room; in a wet pile beside him on the hearth were his raincoat and his hat. In his hand, tightly gripped, he held a small black valise.

As Eugenia met his penetrating gaze, she felt that although he was obviously a gentleman there was something mysterious about him.

"You must have some hot coffee," she said. "Now that the wind has gone down I can get some attention from the servants, who lose their heads completely in a storm."

"Please don't bother about me," he protested.

She was already on her way to the kitchen, for she reflected that, regardless of how he got there or what he was doing there, he would not steal the silver. She was sure of that.

Sam and Liza were crouched beside the stove.

"Oh, Lawd, I thought you was a ghostus, Miss 'Genia," exclaimed the old colored woman. "What's you doing up at this hour in all this storm?"

"I don't mind the storm," answered the girl. "You must make some coffee right away. There's a strange gentleman wet to the skin, in there."

"A strange gentleman in this here weather! How did he get here?"

"I'm sure I can't imagine. He is sick, I think, and I haven't asked him."

"Oh, Lawd, a stranger appeared from nowhere! Sam, what was I a-telling you about some bad luck about to come to this house?" She rolled her eyes heavenward. "I seen a sign that bad luck was a-coming here. And now it's done come. How's anybody to get here, I'd like to know, in this storm? Couldn't get here by no boat, couldn't walk across the water—musta just come by black magic. Oh, Lawd, Lawd! I'se knowed ever since you tole me that this here country was in the war that some c'lamity was a-coming to this house!"

"That's utter foolishness," declared Eugenia. "Forget about black magic and make us some coffee."

Nevertheless she herself was disturbed. Not superstition but common sense made her ponder over the extraordinary appearance of a man at such an hour, in such weather, on a lonely island accessible only by seething waters.

When she returned to the library the man had sunk into a chair, but on his wet knees he held the black bag with both hands, as if it contained something very precious.

Eugenia fancied that as he saw her looking at this bag with interest he made an effort to distract her attention.

"I hate to inconvenience you," he said.

As he entered the hall, a flash of lightning revealed a white, thin face above a turned-up, soaking-wet coat collar

"I am not inconvenienced," she answered. "But I will be if you talk any more. Just try to get dry and warm."

IT WAS not long before Liza entered the room, carrying a large tray, which she placed on a table near the fire. Then as she uncovered dishes of hot toast, bacon, eggs, and fruit, her mistress was amused to see what pains the old woman had taken to propitiate this mysterious visitor, whether his origin be human or whether he had indeed "droped from the skies."

Suddenly Eugenia, perceiving that the stranger was waiting for her to seat herself at the other side of the table, realized that the intimacy of this breakfast was embarrassing, but she determined to make the best of it, and to this end kept the old servant in the room throughout the meal. With instructions in regard to changing the water in the vases of roses, straightening books and rugs, and mopping up the pools of water on the floor, she even avoided any further conversation with him beyond the merest commonplaces.

As if divining her motives, as soon as Liza had left the room with the tray he rose and walked to the window, remarking: "The storm is fast disappearing."

For another moment he stood there as if unable to decide upon his course of action. Then, abruptly, he went on:

"I can never thank you enough for your kindness. You will never know what it has meant to me at this time. And now I must intrude upon you no longer."

"But you are not yet dry. You ought not to go out again at once."

HE LOOKED at her intently as he answered: "But I am afraid that the other members of your family might not be so charitable as you."

"There are no other members of my family—except for my aunt, who is not able to leave her bed, and Sam and Liza, I am quite alone."

As she said this she wondered if he had not intended to bring forth just such a frank statement.

Then she was ashamed of her suspicions; for, throwing his raincoat over his arm, he started, valise in hand, toward the door.

"That is all the more reason why I should not impose upon you further."

He smiled at her, and the girl was astonished at the way in which his face was transformed. In the dim light she had not before perceived how attractive he was.

She too rose. He did not offer to shake her hand, but bowed in a graceful, foreign manner.

He walked toward the hall, put up his free hand to separate the dull blue portières, then suddenly caught at them, swayed a moment, then fell, full length, on the rug.

Terrified, she ran to him, and, kneeling, felt his heart. It was still beating. She put her fingers on his thin, limp wrist. His pulse was feeble.

Lying there at her feet he looked pale and haggard. Although he could not have been much over thirty, he had the lines around his mouth which indicate grave responsibilities and great personal risks. She had seen those lines in the faces of her father's seafaring friends after wrecks at sea.

For the present she felt that she must take care of him. She pulled at the old-fashioned bell cord, and in another moment Liza came hurrying in. At the sight of the limp figure she rolled her eyes in terror.

"Oh, Lawd, Lawd! I knowed harm was a-coming to this house ever since we was in this war!" she moaned.

"Tell Sam to come in here and then go into Father's room and light a fire!" Eugenia commanded sharply, distressed by Liza's persistent voicing of her own fears.

"Yes'm. Yes'm."

The old woman hurried away, glad to be gone.

The man opened his eyes, then closed them, as if content to remain lying there. Eugenia helped the old darky to carry the inert figure into the room on the ground floor, which had been her father's.

Leaving Sam in charge, she went into the kitchen to make a steaming toddy. When she returned the stranger was in bed, propped up on pillows. It gave her a shock to see him wrapped in a dressing gown which had belonged to her father, yet she was glad that it could be used by someone in need.

"Why are you so good to me?" the man asked, looking at her with deep appreciation in his dark eyes.

"It is nothing at all," she said. "There is no one you can disturb here, and since father's death we have lived so quietly that I am sure Sam and Liza will be glad to have someone to look after."

"'Deed that's right, Miss 'Genia," old Sam assented, grinning. "I'se mighty glad to have a gentleman to look after again."

He had procured coat hangers and shoe trees and was already trying to repair the weather's ravages upon the stranger's clothes.

"If there is anything you want, Sam will get it for you. You'd better go to [CONTINUED ON PAGE 29]

MAXWELL

Most Miles per Gallon — Most Miles on Tires

Everything That Counts for Your Profit and for the Future of Your Family Is Moving at Motor-Car Pace and Radius

You can't shut your eyes to that. Are you going to stick to horse-pace, one-fifth the pace of motor cars, and to horse-radius, one-fifth the radius of motor cars?

Are you content to see others seize the golden chances that are offered now and the untold chances that are coming in the next few months? Or will you join your neighbors who are moving at motor-car pace?

A little delay now may have results that all your future cannot repair.

Take this up now. Be fair to yourself, to your girls and boys, to your wife. Look into the changes of the last few months which have placed the whole question of motor-car service vs. horse service in an entirely new light. We say—

1. Motor cars are now cheaper to use than horses for all work which a motor car can do.

2. Of all the motor cars giving maximum service the one that costs least to run and use is the Maxwell.

That ought to make you think. We don't expect you to act on it until we have proved it to you. We can prove it to you. For the sake of your own work and profits, for the sake of your girls and boys and wife, take this up now. Send us a letter today. Make your decision while these cars of greatest efficiency and economy are still procurable. We will send you the name and address of the nearest Maxwell dealer.

Touring Car $745; Roadster $745; Coupe $1095
Berline $1095; Sedan with Wire Wheels $1195. F. O. B. Detroit

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Maxwell Motor Sales Corporation

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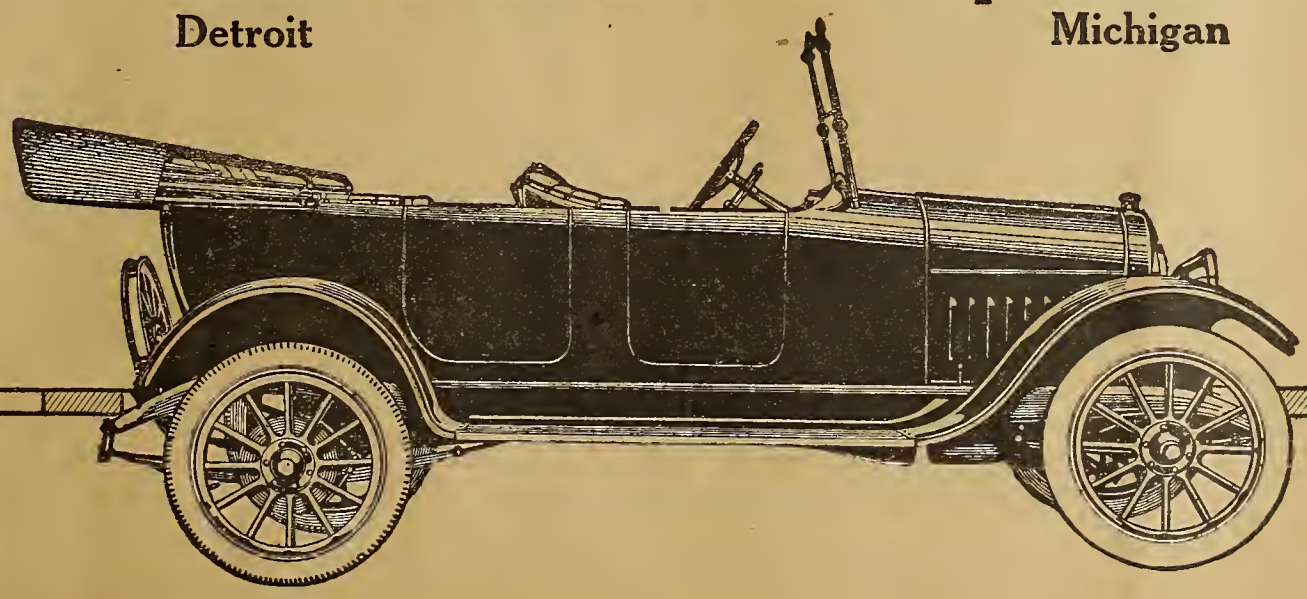
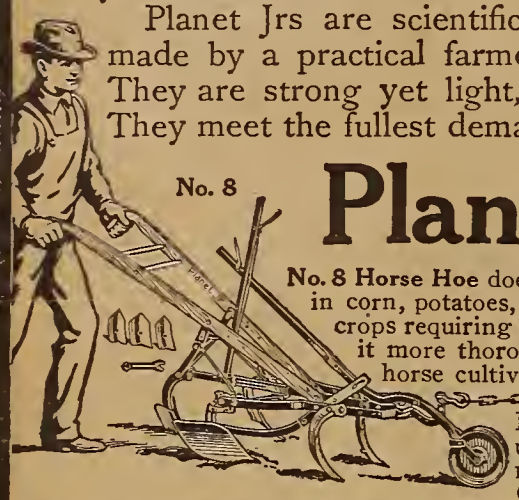


Plant more! Get bigger crops with Planet Jrs.

Record crops *must* be raised this year! Do your "bit" in a big way—with Planet Jr tools.

They save time, lighten labor, and increase both quantity and quality of production. They make every minute, every ounce of energy, every foot of soil yield its utmost result.

Planet Jrs are scientific tools, invented and made by a practical farmer and manufacturer. They are strong yet light, and last a life time. They meet the fullest demands of the hour!



No. 8

Planet Jr.

No. 8 Horse Hoe does a greater variety of work in corn, potatoes, tobacco, cotton, and other crops requiring similar cultivation, and does it more thoroughly than any other one-horse cultivator made. It is stronger, better made and finished. Lasts longer. Its depth regulator and extra-long frame make it steady-running. Cultivates deep or shallow and different width rows. 15 other styles of one-horse cultivators—various prices.

No. 12 Planet Jr Double and Single Wheel-Hoe is the greatest combination hand-cultivating tool in the world. The plows open furrows, cover them and hill growing crops. The hoes are wonderful weed-killers. The cultivator teeth work deep or shallow. Crops are straddled till 20 inches high; then the tool works between rows with one or two wheels. Cut down the cost of raising your crops by using these tools. We make 24 styles—various prices.

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Illustrates Planet Jrs doing actual farm and garden work, and describes over 55 different tools, including Seeders, Wheel-Hoes, Horse-Hoes, Harrows, Orchard-, Beet- and Pivot-Wheel Riding Cultivators. *Write postal for it today!*

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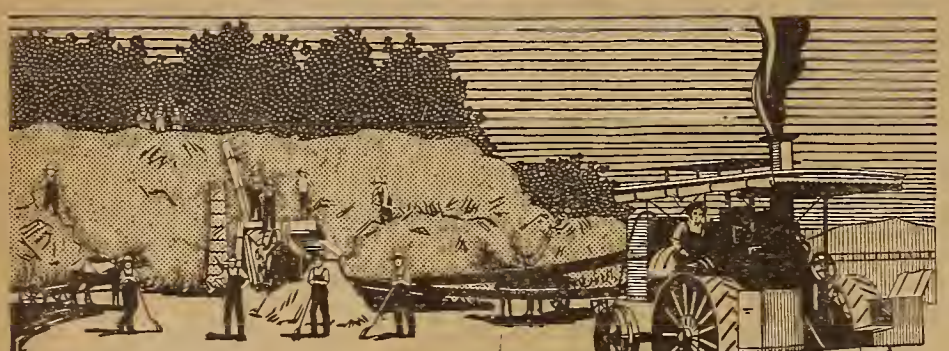

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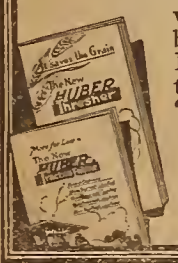
New HUBER Threshing Outfit

EVERY DETAIL of the New Huber Threshing Outfit is there because you and thousands of other threshermen have found it good in the outfits you are using or have felt its need. If you yourself were to build a thresher and engine embodying all your pet ideas, you would not have an outfit more nearly approaching your ideal than the Huber.

THE NEW HUBER THRESHER has counterbalanced straw racks giving the maximum of grain agitation with the minimum of vibration on machine. The big 12 bar cylinder combined with the adjustable concaves insures first class work whether the straw is long or short, the yield heavy or light, the grain dry or damp.

THE NEW HUBER ENGINE has boilers of the Marine type with return flues developing *more steam with less fuel*. Not a stay bolt to rust. For forty years famous for Safety! Economy! and Durability! Qualifies for boiler inspection laws of every State in the Union. Protected by insurance policies guaranteeing against "damage by explosion or rupture." Not a claim has been filed.



Let us give you further information about this Threshing Outfit. Write us today telling us your problems and ask for booklets.

THE HUBER MANUFACTURING CO.

406 Center Street Marion, Ohio

"Just the Grippe"

By CHAS. H. LERRIGO, M. D.

Do you ache in every bone?
It's the grippe.
Do you feel too weak to moan?
It's the grippe.
Do you dread the weary night
And despise the morning light?
Do you feel that life's a fright?
"Just the grippe."

I HEARD that not uncommon expression "just the grippe" again to-day, and it brought to my mind Uncle Job Platt. Uncle Job once thought the grippe a little less than nothing and a great deal less than a bad cold. He was one of those fortunate individuals who had escaped personal acquaintance with the intruder.

"We never had no such thing when I was young," he said. "This yere race is weakenin'. They can't stand nothin'. A bad cold puts 'em to bed with this yere lay grippy. *Lazy* grippy, that's what I calls it."

But there came a season when Uncle Job was himself a victim, and from thenceforth his skepticism as to its deadly character appeared no more, though he still expressed a lively curiosity as to where such a mighty disease sprang from so suddenly, and why they never had it when he was a boy.

As a matter of fact, they did have it when Uncle Job was a boy, and long before that. Epidemics are on record almost as far back as the history of medicine runneth. It has been called by many names—catarrhal fever, Russian influenza, la grippe,—but the name used by the medical profession is "epidemic influenza." After a very serious epidemic in 1848 the disease seemed to run itself out for a season—possibly its attack had been so general that everyone had acquired temporary immunity. So the disease was almost a forgotten thing when it launched out upon its justly celebrated, world-wide scourge of 1889-90. "Russian influenza" was the unpopular name at that time, for it was believed that it had been harbored and disseminated by that benighted country. It brought no credit to Russia by its actions, for it emptied schools, disorganized business, and seriously handicapped the world's traffic by the great number of its disabled victims.

Since it is a dangerous thing to underestimate one's enemies, it is worth while for you to get clear in your mind the fact that grippe isn't a cold, does not come from a cold, is not due to exposure to cold, and is much more dangerous than a cold. It is true that one whose physical condition is weakened by cold may more readily fall a victim to grippe, but colds do not "run into" it unless the "cold" patient comes into contact with some person who has the disease. It is a germ disease. The germ is very small, much smaller than that of tuberculosis, and almost as deadly.

Attacks Vital Life Forces

The most dangerous germ diseases are those in which the invading bacteria develop poisons that overcome and destroy the vital forces of the body. Diphtheria is such a disease. Probably you never thought of putting grippe in the same classification with diphtheria, yet they are alike in this and other dangerous features. Grippe poison, like diphtheria poison, seriously affects the heart, depresses the great nerve centers that control the vital functions of life, and may act with such swiftness that the patient meets a fatal ending without ever developing any of the common catarrhal or other symptoms.

Like other contagious diseases, you get it only by some contact with an earlier victim. You do not necessarily succumb to its first onslaught, but if you are sound and strong, possessing good resistance, you may fight it off. Obviously, therefore, it should be your especial aim, during the grippe season, to keep yourself in a good condition of physical fitness, and to avoid close contact with those having the running, sneezing nose, watery eyes, and spitting mouth that seem to be chief agents in the spread of the disease.

If, in spite of caution, you do get the disease, keep it from others by shutting yourself away from the family circle and using separate dishes, towels, sheets, etc., until you are well. It is not necessary for grippe to "run through the family" if the first patient will isolate himself. This is good practice even with a common cold, for most colds are contagious.

It is useless to ask for a "grippe medicine." There is no such thing. It is true that certain medicines are helpful at certain stages. Very small doses of aconite, if taken in the first stage, have a favorable influence. In the same way, small doses of tincture of gelsemium often relieve the aching and lassitude. Many doctors rely on aspirin for this work. But no two cases of grippe are alike. It is a treacherous disease, attacking always at the weakest point. Wherever you may have a weak spot, there will the heaviest charge be made—be it heart, kidneys, or nervous system. It is folly to attempt to name a specific medicine for it. If medicine is to be given, it must be carefully chosen by the attending physician to fit the needs of that particular case. Don't try to be your own doctor in grippe.

Help to Cure Yourself

There are some things you can do to help yourself to recovery, even though medical attendance is not procurable. The process of cure will be only by the development of an antitoxin generated by your own phagocytes (white blood corpuscles) as you develop your own powers of resistance. Leaving medicine out of consideration, there are many ways in which you can strengthen this resistance and thus quicken the manufacture of your antitoxins.

The most important measure of all is to relieve all other strain, and concentrate on getting well. Not only should you quit all work and worry, but you should go to bed and stay there until better; and, while there, all of life's problems, even daily household cares, should be dismissed from your mind.

What good does this do? It eases the load. Physical processes are more active because mental processes are relieved. The circulation is better. The very act of staying snugly in bed, with the skin at an even temperature, lightens the work of the heart and helps the excreting organs in their hard job of ridding you of the poison.

The skin is an important agent in recovery, and needs special care. Sweating is beneficial in moderate degree, but must not be carried to the point of weakening the patient. A cleansing bath is necessary each day, and alcohol rubs are beneficial while the aching lasts.

Free drinking of water is helpful in promoting elimination by the kidneys, and a free action of the bowels, without purging, is also desirable. The diet should not be crowded. Until appetite returns it may well be wholly liquid; but as soon as digestion improves, the patient should be fed well with tissue-building and heat-forming foods, for grippe is a most debilitating disease.

The complication most to be dreaded in grippe is pneumonia. A severe cough does not always indicate this, and it may develop in cases in which cough is not a marked symptom. A more reliable index is ease or difficulty of respiration. If there is the least suspicion of pneumonia it is imperative that the patient be confined strictly to bed, and a doctor should be procured at any cost.

Bear in mind that in any complication, bronchitis, nephritis, migraine, or whatever it may be, your patient will do much better if quietly at rest in bed, but every effort should be made to secure medical attention, for grippe is a serious disease.

Don't forget that grippe is a real disease.

Don't slight the fact that it is a poisonous disease.

Don't expose yourself to it.
Don't expose others to it.
Don't try to doctor yourself.
Don't try to fight it, sitting up.
Don't give way to mental depression.
Don't get up too early.
Don't neglect the "hang-over" symptoms.
Don't quit treatment until you are quite well.

Farming Without Horses

By G. F. WILSON

I HAVE been deeply interested in tractors and have wondered how much of an all-work machine they really are. I have contended that a light tractor will furnish all the power that is absolutely necessary on an ordinary-sized farm, or that a crop that is usually put in and tended by one man can be handled without the use of horseflesh.

This summer I had the satisfaction of seeing the experiment tried out, and with splendid success.

We secured a farm in northern Minnesota that had some 50 acres broken, the rest being prairie sod. Owing to delays, we did not begin work until the neighbors had their small grain practically all in. When we did get to work it was necessary to put in long hours, and here the little iron horse showed its real worth by chugging merrily away from sun-up to sun-down with only a stop of about twenty minutes for dinner.

The tractor used was an 8-16 of the kerosene-burning type. In the old breaking it pulled three 14-inch bottoms easily, and a part of the time on high speed. In the new sod it would pull three bottoms, but the load seemed to be too much of a strain, so one of the bottoms was removed.

The machinery used was of such a type that when we were ready to seed it was necessary to have someone to ride the drill in order to make it drill evenly

Plenty of power means fewer times over the ground

and cover all of the grain. Of course, there is machinery made that can be handled from the tractor, but we hired a boy who did the work as well as a man could have done.

We hitched on a double disk, an eight-foot disk drill, and a two-section harrow. This was probably more than one should expect an 8-16 to handle, but we were in a hurry, and since it seemed to handle them easily we left them all on.

One Man Tends 120 Acres

It took one man and a boy three days to double-disk, drill, and harrow (the ground was really harrowed twice by the lapping of the drag) a 40-acre field. This was at a cost of $3.30 per day of ten hours for kerosene and cylinder oil, making a total cost of $9.90 for the power. It took a little less than four days for the man to plow the field, working from sun-up to sun-down at an average cost of $4.10 per day for the power. This makes a total cost of $26.30 for the power to prepare the seed bed and put in 40 acres of rye. In the new breaking, of course, the cost was higher, for only two bottoms were used for breaking and more time was spent, though the same seeding plan was used there, so the added cost was only on the plowing.

When we planted the potatoes, some power was wasted, for the planter was pulled alone and was not nearly a load. The rows were placed far enough apart so that the tractor could straddle one without touching the others on the side.

In spite of the late start, the one man and the boy prepared and planted 120 acres in all and were through in fairly good season. Besides the small grain there were potatoes, beans, and rutabagas.

At harvesting time, only one binder was used, there being too few acres to warrant the purchase of another. The engine would have handled two binders easily, for it pulled one eight-foot machine on high speed with the throttle only about half open.

We stacked the grain to save threshing help, so we fastened two wagons together and hauled two big loads at a trip.

We used the tractor for a number of other things, such as hauling lumber and logs. We did some excavating with it. This was accomplished by the use of two long log chains and a wheel scraper.

At first our neighbors laughed at the idea of putting in, tending, and harvesting an entire crop without the use of horses. But, when they saw how well the experiment was progressing and noted the extremely low cost of the tractor fuel and upkeep as compared with the cost of horse feed, they took the matter a great deal more seriously.

Heat Tight Nuts

ONCE it became necessary for me to remove a pinion gear from one of my farm machines. It was on the shaft that held it with a screw thread. It had been on that shaft ever since I had had the machine. It was held in position by the gear driving it and always forcing it in the same direction as the thread on which it was screwed. So I found that it was on tight.

In fact, all the wrenches that I had would not start it. I also borrowed all the big wrenches that I could find around the neighborhood. But they were useless too. I was anxious to use the machine, but it looked as though it would be "laid up" indefinitely.

One of my neighbors who was helping me remarked, "If you only had a gasoline torch you could move it."

"How would that do it?" I asked.

"I think that if you took the torch and heated the pinion it would expand and come off easily," he explained.

"Well," I said, "we have none and there is none handy, but I know what I'll do, and I would not be surprised but what it will work. You watch."

I got a rag and wound it around the balky pinion. Then I wet it thoroughly with kerosene, set fire to it, and let it burn out, which took about ten minutes. I brushed off the burnt rag that remained and felt of the pinion carefully to find if it was hot. It was.

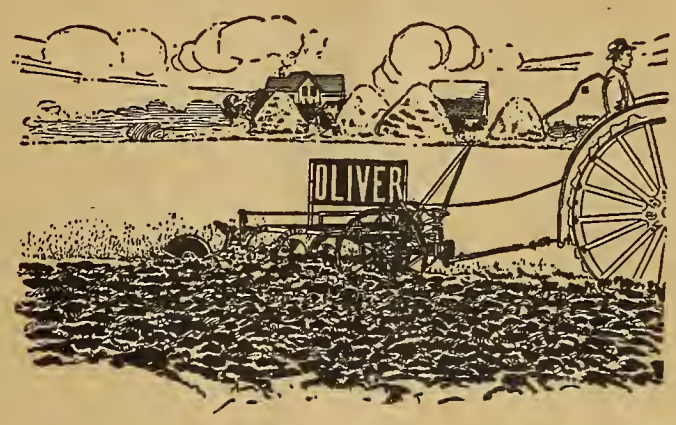
We then placed our wrenches and turned. It came off easily. I have since used the same method on stubborn gears, nuts, and other parts that were screwed on too tight.

Cylinder Head Blowouts

AFTER overhauling a gasoline engine and replacing the cylinder head, one frequently has difficulty in keeping the gasket from blowing out. It usually blows out when the engine is pulling hard or is overloaded.

This trouble can easily be entirely overcome in the following manner: Cut a piece of galvanized window-screen mesh wire the same size and shape as the gasket, and place it over the asbestos packing, tighten all the stud bolts down evenly; then take a piece of 2x4 pine and place against the cylinder head near each stud bolt in succession, and tap with a hammer. Then draw the studs up tight and repeat the operation until the head is firmly in place. The screen will imbed itself in the asbestos and hold it securely.

No Idle Acres



Your country is calling upon you not only to put under cultivation every possible acre, but to plant the crops in properly prepared seed beds that will insure a maximum yield.

Labor is expensive and hard to secure. Horses are in great demand by the government and needed in carrying on the war. The conditions under which you farm are bad, and from every indication will grow worse. The use of tractor power on your farm is a ready solution of these problems.

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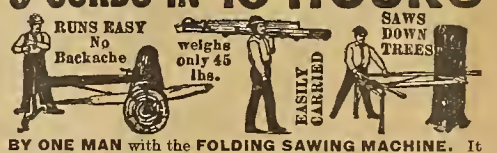

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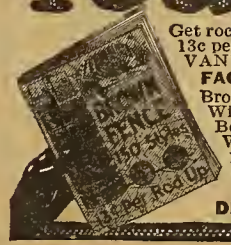

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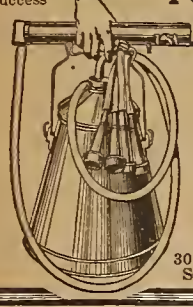

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A Happy Home in Happy Land, Upper Wisconsin, the Cloverland of America. Buy a Home in a Prosperous Country. Low Prices; 10 Years to Pay

SINCE opening our tract of land for settlement four years ago in Upper Wisconsin, hundreds of families have taken advantage of our exceptionally attractive offer and have bought land from us. These farmers have built themselves good homes, also have the advantage of good schools, churches and lodges. Many of these farmers have written us voluntary letters telling the satisfaction they have had in becoming property owners through our liberal offer. We have printed some of the letters in a booklet entitled "Happy Homes in Happy Land," and the booklet contains 37 pictures showing typical homes of the people who have taken advantage of our offer and settled on this tract of land.

High Prices for Farm Products War prices for farm products have made farmers a prosperous group of people, and these high prices are going to continue for some time. Every farm renter or any one else wishing to acquire a home of his own, should take advantage of the unnsual opportunity presented hy us and become financially independent. Profits from crops grown on onr land will quickly pay ont the original cost. If wished, we will clear five acres, build a house, and get everything in readiness for you to come on to the land, and give you ten years to pay, on a reasonahle down payment. Our land was formerly covered with hard wood forests and the falling leaves for hnndreds of years have made a deep, rich soil of great prodnctiveness. The average rainfall is from 36 to 40 inches. This is an exceptionally good offer and gives you a chance to own a farm in one of the richest farm states in the Union. Government statistics show that the yield in Wisconsin is greater per acre than six other prominent farm states. The climate is just right to raise the kind of crops you are familar with. There is a wonderful growth of grass, and an abundant snpply of good water—an ideal section for dairying and stock raising. The great central markets are near at hand, and the roads are excellent. Also a great railway system runs through the tract.

Two Free Books Tell All. Send for Them Books entitled "Farm Homes in Upper Wisconsin" and "Happy Homes in Happy Land" contain complete information. Read these hooks; they will open your eyes to new wonders and new possihilities in a new land. Send today.

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Painting the Car

By W. V. RELMA

"JOHN, we'll have to get the car painted. It's just awful!" And John, looking the car over, had to admit that it did look bad.

The body, once so lustrous and smooth, had a dull grayish appearance and also had a number of dents and scratches. Careless hands had rubbed the paint from the top of the doors. The right rear fender sagged in a sickly manner. The top was stained and rather pale. Mud was frescoed all over the running gear, and the grain of the wood showed in a number of places on the wheels. Freckles of rust appeared upon various parts of the body. Wind and rain and dust had certainly made a change in the appearance of the good old "ship" and something would have to be done.

An interview with a near-by painter revealed the fact that the car could be painted for $40. But John had once seen a car painted, and decided he could do the job himself. So he went to a friend who understood such work and talked the matter over.

The labor of course was the main item, the paint and other material being a comparatively small expense, three or four dollars usually covering all the outlay necessary.

The first step was to get the car thoroughly clean. This meant more than the usual removal of mud and dirt. The grease and oil on the parts to be painted had to come off also. This was done with a brush, a small pail of gasoline, and a cloth.

Get Rid of the Dirt

The radiator and hood and all the cracks and crevices that accumulate dirt were carefully attended to. If this dirt had been allowed to remain in the car it would have turned to dust, which would have settled on the freshly varnished surfaces and made a rough-looking job.

If the surface of the car is very much scratched up and rough it is necessary to remove the old paint. This can be done with a good paint remover applied with a brush. After the paint has been softened it can be scraped off. All lumps and patches of paint must be removed and the surface rubbed down with sandpaper till all is clean and smooth. Then the car should be washed with gasoline and allowed to dry.

Next a coat of primer is applied, preferably with a camel's-hair brush. After this has been allowed to set for a day or so, go over the surface and fill all cracks and holes with putty. Allow the putty to become thoroughly dry, then rub smooth with sandpaper. Dust is the enemy of good painting, so after each rub-down remove the dust as thoroughly as possible. Next a coat of body color can be put on, and permitted to dry as before. This in turn should be rubbed down with a very fine sandpaper or steel wool and the dust removed. Then a coat of color varnish may be applied and rubbed down after perfectly dry.

Now, if an extra fine and durable job is desired, a coat of what is known as rubbing varnish should be put on. This, when hard, should be rubbed down with a piece of felt and some pumice and water. Then the coat of finishing varnish is due, after which the car should be allowed to stand for at least a week before being put into service.

If the car is not badly scarred or scratched a coat of color varnish rubbed down and followed by a coat of finishing varnish will make a satisfactory job. The running gear can be painted with ordinary carriage paint, with little or no rubbing. The engine can be enameled with a special heat-proof preparation which can be obtained from any accessory house. Outfits containing all the needed materials for refinishing a car can be purchased from a good accessory house or reliable paint store."

Redressing the Top

The inside of the top, which as a rule becomes dull and stained by the rain, can be refinished with a lining dye, which is applied with a brush and gives a nice even color as when new. The outside of the top may be renewed with a good top dressing. The radiator, if of the enameled type, should of course have a new coat of enamel applied, but not over the cooling fins, as this would interfere with the efficiency of the radiator.

Any mechanical troubles that the car has may conveniently be attended to during the painting process. In fact, the body may be removed and the engine and other parts overhauled while the body is being painted if room permits. Any dents or cracked places in the fenders or body should be repaired. Frequently a weak fender can be strengthened by applying a plate to the under side and riveting through in a neat way. If the fenders are badly damaged it would be more satisfactory to replace them. The under side of the fenders should be painted, as the rust attacks that part first and soon weakens them.

Glues, Pastes, and Patches

By George W. Brown

WHEN we fit a patch for the inner casing, for our boot or shoe, be it leather, fabric, or rubber, we get it to stick better for service if we make a feather edge about its rim.

This is hard to do with a dull knife, and the usual method is to lay the patch on a piece of soft board, when our knife soon gets dull as we chip the edge away. Our method for thinning down to a feather edge is to whet our knife sharp on a fine-gritted whetstone, then lay our patch flat upon this same stone, and as we work and our knife slips out from the edge of the patch as it is pared off, it becomes sharper instead of blunt, and the thinning-down is done the easier. Be sure you have rubber cement for rubber patching, leather cement for leather work, and rock cement for china.

Always leave rubber cement cure in the air just a little longer than your directions and you will have less tiny air bubbles beneath the patch.

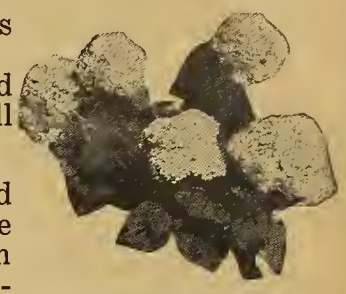
Paint made a wonderful change in the appearance of this car. It now looks like new again

FRAGRANT FLOWERS FROM SPRING TO FALL

The tassel-shaped, dainty flowers of the Deutzia.

ORNAMENTAL shrubbery affords the simplest and yet the most effective means of adding permanently to the beauty and attractiveness of the home. Beautiful flowers, borne in profusion from spring to fall, brilliant berries, red and white, ornamental foliage, yellow, red, orange, gold, and the hundred shades of green, all unite to delight the eye of the beholder.

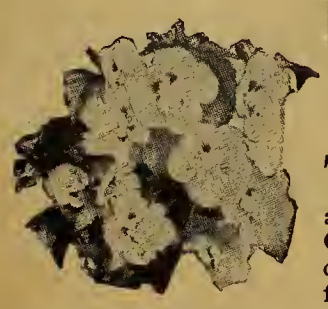
The *Farm and Fireside Collection* of Hardy Ornamentals (illustrated and described below) gives the utmost range of beautiful flowers, ornamental berries, and attractive foliage. These shrubs, as we send them, are one-year size, cut back to about a foot in length. They take root at once, make rapid growth, and soon make the delightful appearance, as shown in the picture.



The stately Snowballs almost entirely conceal their foliage.

The Ivy is resplendent with brilliant coloring.

Brilliant berries and neat, dense foliage of the Barberry.



The Rose of Sharon is aflame with beauty.

Flowers of the Cornus often appear before the snow is gone.

Our Gift to You

THE Farm and Fireside Collection contains Seven Ornamentals, as shown in the picture above. This assortment is so arranged that their flowering periods overlap through the season, thus providing a continuation of flowers, from earliest spring, through summer and to the very edge of winter. The Cornus opens its great white flowers, sometimes before the snow is gone. Then comes the brilliant canary flowers of the Barberry. June brings the delicate flowers of the Deutzia, followed by the stately flower-heads of the Snowball Hydrangea. Then the Rose of Sharon, aflame with gorgeous bloom, matches the gorgeous fall coloring of the leaves, and ushers in late fall with a riot of color. Even in winter, the colored berries and barks have a touch of summer color.

The FARM AND FIRESIDE Collection

ONE CORNUS STOLONIFERA (Red Osier Cornell.) The white flowers, 3 to 4 inches across, are borne very early in the spring, before the leaves appear, and remain many weeks. White berries and dark red bark. Foliage variegated in the fall.

ONE DEUTZIA Dainty, bright green, compound foliage. White or rose-tinted, tassel-shaped flowers are borne thickly in wreaths along the branches, in June. Makes beautiful cut flowers. Shrub grows 6 to 8 feet high, with long, graceful, drooping branches.

ONE ROSE OF SHARON A beautiful shrub of rapid growth, bearing a profusion of flowers in many shades of red and yellow, through late fall, when so few other flowers are in bloom. Grows 12 feet high. Light green foliage turns bright yellow in fall.

TWO JAPANESE BARBERRY (Berberis Thunbergii.) Dwarf. Neat, dense foliage. Brilliant yellow flowers in early spring followed by bright red berries that remain through the winter. Grows spherical in form, but may be trimmed to any shape.

ONE SNOWBALL HYDRANGEA (H. Arborescens.) The flowers are borne in dense spherical panicles, in summer, resembling clumps of snow, and almost entirely concealing the foliage. One of the most beautiful shrubs that grow. 6 to 8 feet high.

ONE AMERICAN IVY (Virginia Creeper, Ampelopsis Quinquefolia.) A persistent climber, clinging to wood, brick, stone or stucco. The foliage overlaps, giving a "shingled" appearance. In the fall and winter the leaves are resplendent with brilliant colors.

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Each collection is held until time for planting in the locality in which our subscriber lives; when shipment is made complete directions for planting and care are sent. The approximate planting time is as follows:

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Latitude of Columbus, Ohio..Mar. 1-June 1
Latitude of St. Paul, Minn...Apr. 1-June 15

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Offer No. 1 *Send 75 Cents* and we will enter or extend your FARM AND FIRESIDE subscription for *Three* years and mail the shrub collection at proper planting time, all charges prepaid.

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When They're Not Fighting

LONG before we got into the fig... the seas we were represented o... by the American Ambulance Se... that service Rei Bronson Woolle... picture you see with his ambulan... many months at Verdun, the scene... of the bloodiest fighting of the wa... hearing his story the Editor aske... tell it in an early issue to FARM A... SIDE readers. This he promised to ... FIRE-

THIS husky trombonist of a United States military ban... in France must play the "Star Spangled Banner" pret... well when even the company's dog mascots stand at atte... tion the minute he begins. All Europe is standing at t... tention nowadays when the well-known strains arise, a... they say the old song will soon be more popular there th... "Tipperary." When asked recently why he practiced... long and strenuously, the trombonist finished the str... without taking his eye off the music, took a long bre... and then drawled: "Well, you see the Germans are s... musical critics. I'm practicing up so's I'll have it lett... perfect when we make our début in Berlin."

Photograph by Central News Photo Service

TO THE average American the letters Y. M. C. A. bring to mind the picture of a nice big building on Main Street, with a gymnasium, a swimming pool, and a cafeteria, and remind him of $10 checks donated yearly to keep it going. To the boys at the front it means something different—a hut maybe, like the one in the picture, made of sandbags and scraps of lumber or just a plain dug-out. Not safely tucked away on Main Street, Paris, either, but right out under shell fire. Here Sammy can get chocolate and coffee and other trifles he has longed for in the trenches. Best of all, he may glean a bit of gossip about what is going on in the rest of the world.

British Official Photograph

IT DOESN'T take long for Sammy to make friends with our French allies. Americans have the knack of making friends, and this boy has proved that he is no exception. It has been no trouble at all for him to adopt a grandmother, and no doubt he has already persuaded her to knit him a pair of socks. We wonder how they manage to understand one another; though, of course, grandmothers have a way of always making themselves intelligible to boys, and no doubt this old French lady, like all the other French folks, is trying to make France as homelike as possible for our boys.

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Photograph by Brown Brothers

MOTHER and Dad need not worry about the health of the boy "over there." He has orders to report at once even his little aches and pains to the doctors in charge, and all the camps have plenty of improvised hospitals. The one in the picture is a tent with rough board tables to hold medicines and instruments. The chap who is being treated for a slight injury is receiving as good attention as if he were at home, with Mother to bind up his brow, and his ailment gives him a much-prized, though short, vacation from the strenuous program of practicing the arts of war.

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SOCIETY girls in England are spending some of their spare time serving U. S. fighters. In the picture a prominent English belle is serving a soft drink to an American soldier in the Y. M. C. A. "Eagle Hut" on the Strand in London. The "Eagle Hut" was established to comfort the fighters far from home, and it is an effective means of putting good things in the way of the boys. In other parts of the hut are places where the soldiers can read, write, play games, or listen to music. Here they can find cheerful companionship at any hour of the day.

NO WONDER the boys are all smiling broadly. The gay bags which the pretty Red Cross representatives are passing out were made by the girls at home, and contain all sorts of little articles soldiers appreciate. Some of the things they like to find in comfort kits are: Razors, tooth brushes, combs, buttons, thread, needles, pins, playing cards, pens, pencils, writing paper, knives, brushes, mirrors, and a cheerful letter from the giver. The boys also like joke books. You make them by taking a snapshot album and pasting in it your favorite stories. If you are aching to make a comfort kit, ask us how; or, better still, ask the nearest chapter of the Red Cross.

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PICTURE puzzles and checkers may sound pretty tame after several days in the front trenches, but quiet and safety are attractions enough for Sammy when he comes back for a few days' rest. There is real satisfaction in facing an opponent who has no more hostile design than beating him in a friendly game like Mother used to play. If he doesn't like checkers, there are chess or dominoes, or he can write home to Mother and the girls, or play the victrola, or read the latest English newspapers. Even soldiering has its lighter side.

NO MATTER how far they wander from the home hearth-fires, the boys always take their national game with them. In the background is the Y. M. C. A. hut which furnished the bat and balls. When the British have a few hours to while away in healthful exercise, they play cricket, a game which Americans don't like as well as baseball or football, but which they readily learn to play with skill. The army camps are well provided with stars in every branch of athletics, having drawn many college athletes who won glory during their years on the campus and had then gone back home—so they thought—to star in Father's business.

MANY of the American soldiers now in France are encamped in or near picturesque towns which always extend hearty French hospitality to them. The soldiers in the picture are standing in mess line in a village somewhere in France, receiving their noonday meal at a mess tent on the main street. One of the nice things about giving up that extra lump of sugar you used to put in your coffee is that you know your sacrifice insures plenty of sweetening in the tin cup which you see Sammy carefully balancing in the picture.

Photograph by Central News Photo Service

MORE WORK FROM YOUR HORSES

Heavy spring work takes the surplus flesh from the horse. His collar no longer fits. His neck and shoulders chafe and gall. He can't do his full share of work and you lose money. Prevent these evils by using TAPATCO Pads.

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Consisting of wire staple, reinforced with felt washer (note where arrows point). This gives the hook a better hold and prevents pulling off. The weakest point is made strong and life of pad greatly lengthened.

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Pat. In U. S. Dec. 1, 1914.
Pat. In Can. Apr. 6, 1915.

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The book shows you how to keep crop costs by lots; labor charges against crop; crop rotation records. Contains also a table to keep accurate record of your breeding—dates, etc. Also a Workman's Time Sheet and Wage Table—saves a world of bother. Also pages for Inventory; table of standard weights of all farm products. Also directions as to how to measure land; corn on cob in cribs; hay in different style stacks, etc., etc.

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Eliminate Disease; Make the Cow Productive

If your cow is not giving the quantity or quality of milk you expect, it is time to give her medical attention.

For twenty-five years thousands of dairymen have used Kow-Kure as their "first aid." Particularly before and after the calving period, the use of Kow-Kure is valuable. It is a sure preventive of Milk Fever and Retained Afterbirth, and will enable the organs to resist the diseases which frequently originate at this time.

Kow-Kure has a positive action on the genital and digestive organs, toning them up, making them perform properly and helping the system to function as nature intended. Kow-Kure has proven a prompt remedy for Abortion, Barrenness, Scouring, Lost Appetite, Bunches and other common ills.

A small investment will prove the worth of Kow-Kure in your dairy. Put it to a severe test; try it on your poorest milker and watch results. Druggists and feed dealers sell it; 55c and $1.10 packages.

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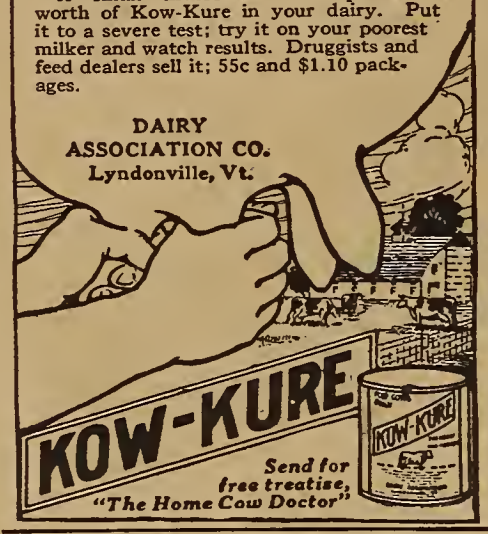

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($1.00 per package). Satisfactory results or money back. Fleming's Vest-Pocket Veterinary Adviser. Helps you distinguish heaves from other ailments. Write for the Adviser. It is FREE.

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THINK of it! For only $2 down you can now get any size of the New Butterfly Cream Separator direct from our factory on a plan whereby it will earn its own cost and more **before you pay.** You won't feel the cost. For only $29 you can buy the No. 2 Junior—a light running, easy cleaning, close skimming, durable, guaranteed separator. Skims 95 quarts per hour. We also make five other sizes of the

NEW BUTTERFLY

up to our big 800 pound capacity machine shown here—all sold at similar low prices and on our liberal terms of **only $2 down and a year to pay.** Every machine guaranteed a lifetime against defects in material and workmanship.

Easy To Clean
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You can have 30 days' FREE trial and see for yourself how easily one of these splendid machines will earn its own cost and more before you pay. Try it alongside of any separator you wish. Keep it if pleased. If not you can return it at our expense and we will refund your $2 deposit and pay the freight charges both ways. You won't be out one penny. You take no risk. Postal brings Free Catalog Folder and direct-from-factory offer. Buy direct and save money. Write today.

ALBAUGH-DOVER COMPANY, 2139 Marshall Blvd., Chicago, Ill.

(1)

Winter Dairying

By J. B. FITCH

FARMERS who are milking cows as a side line can increase the profits from this source by breeding their cows so that they will freshen in the fall or early winter months. Dairy farmers and experiment stations have found many things in favor of fall calving, the most important of which is the fact that a cow freshening in the fall will produce more milk and butterfat in a year than a cow which freshens in the spring or summer. It used to be generally believed that the most natural time for a cow to come fresh was in the spring of the year, when the cow as well as the calf could soon go on pasture and be but little trouble and expense. While this is true as far as it goes, when we consider the production of the cow for a year it is in favor of fall calving. A cow calving in the spring gives her maximum flow of milk on pasture and at a time when flies are bad and the weather hot, both of which are not conducive to the maximum production of milk. Later in the summer the short pasture causes a still further decrease in production, and in the fall of the year, unless one has a silo, the cow goes on dry feed, which does not have a stimulating effect upon the production of milk.

In the case of the cow freshening in the fall she gives her maximum flow on dry feeds at a time when the farmer has more time to spend with her. She is also producing her maximum of milk when dairy products are high in price as compared with the cow fresh in the spring during the flush season when dairy products are at their lowest price. Toward spring, as her milk production declines, she goes out on pasture, which has a tendency to stimulate a higher production and will also keep up her flow longer. As the pasture becomes short and the weather hot she can be dried up. Thus the cow calving in the fall not only gives her maximum flow when dairy products are highest in price, but she will also produce more fat and milk during the year and can be dry during part of the busy season.

The fall calf will generally show as much size at the end of the year as the calf dropped the previous spring, and is ready when spring comes to go out on pasture and will take but little further attention.

There is much in favor of the farmer having cows freshen in the fall. It cannot be done in the case of all cows, but it can be more generally practiced than at present. To have cows freshen in the fall they should be bred within the next three months.

Make the Cream Can Last

THE sheet-steel and tin-plate industries have been burdened with war orders to the extent that cans for dairy products are not only high-priced but are frequently unobtainable except through special channels not available to the average dairyman.

Conservation of present supplies is therefore essential to insure enough containers for marketing the milk and cream which American farmers have been asked to produce. The campaign is being made along two lines— to check the rough handling of shipping cans by transportation companies, and to investigate methods of straightening and retinning old and battered cans.

Mishandling of cans includes three classes of alleged abuses: Unloading cans at wrong stations; unloading cans with unnecessary roughness; allowing cans to remain out in the rain to become rusty, or to be stolen.

Investigations as to rejuvenating old cans show that the cost varies from one fourth to one third the value of new cans. In the renewing process old cans are taken apart, the bent metal straightened, and new sections furnished if necessary. The cans are then assembled and retinned.

Skim Milk for Humans

ALTHOUGH skim milk is recognized as having great value in feeding animals, the United States Department of Agriculture points out that its value as human food should be kept in mind. By substituting grain, green feed, buttermilk, and whey in animal feeding, much skim milk may be left for human use as a beverage, in cooking, condensing, or for making cottage cheese. Only the surplus of this valuable human food should be fed to stock.

Old Devonshire Cream

BEFORE the days of the milk separator the housewives used to have what they called Devonshire cream. Folks of to-day, hearing of this name, are quite likely to imagine that the cream is so called because it came first from Devonshire, England—a land noted for dairy products. Whether or not the original name was thus used is not told to us, but certain it is that our grandmothers and great-grandmothers had the most delicious cream imaginable.

They would take rich, new milk, place it in shallow tins, and allow it to warm on the back of the stove. It was not allowed to boil or even be scalded, and the cream would rise to the surface very fast. In a short time the pan of warmed milk was placed in a cool place—often in another pan of spring water. Then when the milk and cream were thoroughly chilled the latter was skimmed off and placed in jars. This cream was of about the consistency of new butter, and was delicious. It was used with cereals, berries, pies, puddings, and in every way adding much to the meal, and often begged by the children for between-meal lunches when spread on bread.

Taken in this way, after the milk had been warmed just right, this cream would stay sweet for three or four days—a thing that cannot be done with separator cream.

A testing outfit is inexpensive, simple to operate, and it is to a dairyman what a compass is to a ship's pilot

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WITH REDUCED PRICES NOW READY

If you need fence you need this book of wonderful fence values. It shows the greatest variety of designs of high grade Fence at prices that will put a big saving in your pocket. These strong, durable, long-lasting, Rust-Resisting Fences are made of Open Hearth Basic Steel Wire, Drawn, Annealed and Heavily Galvanized in our own Mill.

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at money-saving prices. There's not a single item of extra selling expense between our Wire Mill and your farm. Isn't this the way you want to buy? Here's a few of our many values:

26-in. Hog Fence, - 21¾c. a rod.
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SPECIAL PRICES ON BARBED WIRE.

More than 100 other styles of fence at proportionately low prices. Hog Fences with Barbed Wire woven in at bottom. Farm, Poultry and Lawn Fence, Farm Gates and Fence Supplies. Every user of fence should get our Book of Bargains. Write today. A Postal Card will do.

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ABSORBINE
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will reduce inflamed, swollen Joints, Sprains, Bruises, Soft Bunches; Heals Boils, Poll Evil, Quittor, Fistula and infected sores quickly as it is a positive antiseptic and germicide. Pleasant to use; does not blister or remove the hair, and you can work the horse. $2.00 per bottle, delivered. Book 7 M free.

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FARM FENCE

21½ CENTS A ROD for a 26-inch Hog Fence; 31¾c. a rod for 47-in. 88 styles Farm, Poultry and Lawn Fences. Low prices Barbed Wire.

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BETTER CATTLE

Get full service from your cattle. Lameness, scouring, sore udders and kindred ailments reduce their usefulness and fruitfulness.

Use Sloan's Liniment; easily applied and quickly effective. It penetrates at once.

You will find many uses for this fine remedy in the home as well as in the barnyard. Always have it handy.

Buy it at your druggists. 25c 50c $1.00

The 18 oz. $1.00 bottle contains six times the 25c size.

Sloan's Liniment

To Sell the Corn or Feed It?

By Thomas J. Delohery

NEARLY $5,000 profit was made on 49 steers sold by J. H. Chenoweth of Fulton County, Illinois, on the Chicago market. The steers averaged 1,505 pounds and sold for $17.35 a hundred, or a total of $12,794.88.

Some of the corn fed these cattle cost $2 a bushel, a lot of it $1.50, and the rest less than $1. It averaged $1 a bushel for the entire feeding period. Mr. Chenoweth said that figuring the $531.60 profit from the hogs following the steers, and the 500 loads of manure produced, which was worth $2 a load, or $1,000, he made money by feeding the corn. However, if all of the corn had cost Mr. Chenoweth $2 he would only have had the profit from the hogs and the 200 loads of manure for his trouble.

The expenses amounted to $9,494.50, divided as follows: 49 feeders at $7 a hundred, $3,087; 3,430 bushels of corn at $1, $3,430; molasses feed at $32.50 a ton, $861; 200 acres pasture at $5 an acre, $1,000; stalk fields, $25; interest at 6 per cent, $336.32; labor, $250; marketing and incidentals, $500. As the gross receipts were $14,326.48, this left a profit of $4,921.98.

The feeders bought last January weighed 900 pounds, and cost $7. They run in stalk fields for a few weeks before they were put on a ration of corn and molasses feed. Then they were put on pasture, and were fed one-third bushel of corn and four pounds of molasses feed a day per head.

No change was made in this ration until the cattle were marketed. Behind them ran 300 hogs, but not all at one time—one bunch was shifted when it got fat and a thin bunch was put in.

If Your Copy of Farm and Fireside is a Little Late

NOT all the mail trains are running on time these days. The railroads are congested. You know why. So if your copy of FARM AND FIRESIDE is a little late please exercise patience. It will reach you after a few days—at the outside.

THE EDITOR.

A Movable Sunlit Hog House

By John M. Evvard

LITTLE pigs are happy in a snugly built, warm, movable hog house, and so is their mother. Such a house is splendid in providing warmth, dryness, abundant direct and indirect sunlight, ventilation, sanitation, safety, comfort, convenience, serviceability, durability,

These little pigs are happy and so is their mother

low first cost, low maintenance, and pleasing appearance.

These movable sunlit houses are easily cleaned because they have solid wooden floors and plenty of space inside in which to work. That they are durable is proved by the fact that several such houses built at the Iowa Experiment Station in 1907 look as if they would stand ten years' more service.

Such a house is good for the brood sow, the little pig, the fattening hogs, and the herd boar. All are contented within its walls; and it costs not more than one half the present value of a 250-pound hog.

New KEROSENE Light
10 Days Free—Send No Money | Beats Electric or Gasoline

We don't ask you to pay us a cent until you have used this wonderful modern white light in your own home 10 days, then you may return it at our expense if not perfectly satisfied. We want to prove to you that it makes an ordinary oil lamp look like a candle; beats electric, gasoline or acetylene. Passed by Insurance Underwriters. Children handle easily. Tests by U. S. Government and 35 leading Universities show the new improved ALADDIN

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common kerosene (coal oil), no odor, smoke or noise; simple, clean, won't explode. Over three million people already enjoying this powerful white, steady light, nearest to sunlight. Won Gold Medal at Panama Exposition. Greatest invention of the age. Guaranteed.

$1000 Reward will be given to the person who shows us an oil lamp equal to the new ALADDIN in every way (details of offer given in our circular). We want one user in each locality to whom we can refer customers. To that person we have a special introductory offer to make. Yours under which one lamp is given free. Write quick for our 10-Day Free Trial Offer and learn how to get one free, all charges prepaid. FREE

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Our trial delivery plan makes it easy. No previous experience necessary. Practically every farm home and small town home will buy after trying. One farmer who had never sold anything in his life before writes: "I sold 51 the first seven days." Christensen, Wis., says: "Have never seen an article that sells so easily." Norring, Ia., says: "92% of homes visited bought." Phillips, O., says: "Every customer becomes a friend and booster." Kemerling, Minn., says: "No flowery talk necessary. Sells itself." Thousands who are coining money endorse the ALADDIN just as strongly. NO MONEY REQUIRED. We furnish stock to get started. Sample sent prepaid for 10 days' free trial and given absolutely without cost when you become a distributor. Ask for our distributor's plan. State occupation, age, whether you have rig or auto; whether you can work spare time or steady; when can start; townships most convenient for you to work in.

ADJUSTABLE FIT ALL HORSE COLLAR

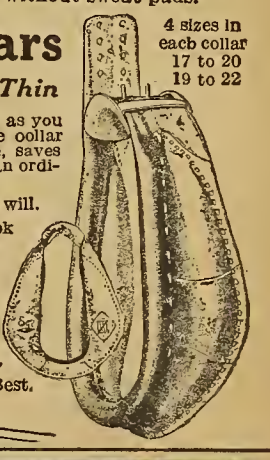
Give Your Horses A Chance to Work

Nowadays you can't afford to waste expensive feed and care on horses that can't "deliver the goods." You can't expect full capacity work if they suffer from sore neck and shoulders, boils, galls, scald, sweeny or other collar injuries.

You'll make money by throwing away the loose, poor-fitting collars and lumpy, scalding sweat pads and getting collars that fit perfectly without sweat pads.

Fitzall Adjustable Collars

Instantly Adjusted to Fit Any Horse, Fat or Thin



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Don't class this big galvanized iron covered, dependable hatcher with cheaply constructed machines. Ironclads are not covered with cheap, thin metal and painted like some do to cover up poor quality of material. Ironclads are shipped in the natural color—you can see exactly what you are getting. Don't buy any incubator until you know what it is made of. Note these Ironclad specifications: Genuine California Redwood, triple walls, asbestos lining, galvanized iron covering. Large egg tray, extra deep chick nursery, hot water top heat, COPPER tanks and boiler, self-regulator, Tycos Thermometer, glass in door, and many other special advantages fully explained in free catalog. Write for it TODAY or order direct from this advertisement.

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Here are two women who have solved the high cost of living problem. One of them, Mrs. J. F. Batterbury, is 54 years old. She was convinced that she could use her time to profit if she had the right opportunity. She became a representative of FARM AND FIRESIDE. She called on people whose subscriptions were expiring and introduced our remarkable offer to new readers. Since then she has earned more than $2,000.00.

The other, Miss Grace Overby, has earned practically the same amount, and is putting herself through college. You can do what they have done. Write today for our terms.

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Upward American Cream SEPARATOR

Thousands in Use giving splendid satisfaction justifies investigating our wonderful offer: a brand new, well made, easy running, easily cleaned, perfect skimming separator only $17.95. Skims warm or cold milk closely. Makes thick or thin cream. Different from picture, which illustrates our low priced, large capacity machines. Bowl is a sanitary marvel and embodies all our latest improvements. Our Absolute Guarantee Protects You. Besides wonderfully low prices and generous trial terms, our offer includes our—

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Whether dairy is large or small, or if you have *separator* of any make *to exchange*, do not fail to get our great offer. Our richly illustrated catalog, *sent free* on request, is a most complete, elaborate and interesting book on cream separators. Western orders filled from Western points. Write today for catalog and see our big money saving proposition.

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Superior Grain Drills

Every feed sows a measured quantity of seed. **Superior Drills** do not skip, choke or bunch; every furrow opener makes a perfect, roomy seed trench, with the seed at an even depth.

Made of the choicest materials. Special features: **Double run positive force grain feeds**—two feeds in one. **Parallel disc bearings** guaranteed for life of drill. **Superior telescoping steel conductor tubes**—non-breakable; no buckling, kinking, bending or collapsing. **Superior patented oscillating drag-bars** insure 50% more clearance.

Made for sowing all large and small grains in 4, 6, 7 and 8 inch rows in plain grain and fertilizer styles.

Constructed for Use With Any Tractor

It will pay you to use this Drill because its effective and economical sowing will bring you greater profits in increased crops. **Superior Drills** are noted for lightness of draft, ease of operation and unusual strength.

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The American Seeding-Machine Co., Inc. **Springfield, Ohio**

BUCKBEE'S "Full of Life" **Seeds** are of Highest Quality. None better at any price. World Beating **Prize Winners** at all County and State Fairs.

BUMPER CROP COLLECTION Made to Build New Business

Radish—Earliest of All,	worth 15c	Lettuce—Sensation,	worth 15c
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Cabbage—Perfection,	worth 25c	Tomato—Everbearing,	worth 15c

This Collection of World Beaters worth $1.00. Guaranteed to please. *Write to-day; mention this paper*

SEND 10c to help pay postage and packing and receive this valuable Bumper Crop Collection of Seeds, postpaid, together with my big, instructive, beautiful Seed and Plant Book. Tells all about Buckbee's Famous "Full of Life" Seeds, Plants, Bulbs, etc.

H. W. BUCKBEE ROCKFORD SEED FARMS FARM 407 **ROCKFORD, ILLINOIS**

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To every one who will state where this advertisement was seen and who encloses Ten Cents we will mail the catalogue

And Also Send Free of Charge

Our Famous "HENDERSON" COLLECTION OF SEEDS

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PETER HENDERSON & Co. 35 & 37 CORTLANDT ST. NEW YORK CITY

The Garden Ideal and Real

By Mrs. E. M. Anderson

I BELIEVE about everyone who has a plot of garden ground frequently plans an ideal garden in his mind, but all too few, according to my observation, realize their ideal in good, substantial garden produce. There are many reasons for such failures, but in my humble opinion one of the main causes leading to garden disappointments is lack of a definite garden plan framed up in black and white long in advance of the gardening season. Equally important with the definite plan is making sure of the required seed of all kinds, and fertilizer as well. Hotbed and cold-frame, even if small, help much, although there are many first-class small kitchen gardens that never have these aids. Just as important as the garden helps mentioned are good gardening tools, plant protectors, and insecticides.

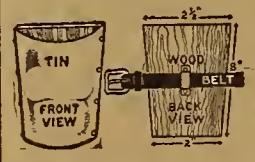
I find one of the important sources of garden satisfaction and enjoyment is the planning in detail of each season's garden during long winter evenings. As early as possible in the new year we write for a goodly array of seed catalogues, and study just what the different seedsmen are prepared to offer in seeds and special collections. It is not uncommon for different seedsmen to get a large suply of some varieties of seed and be able to offer attractive bargains. But make sure the seedsman is one with a reputation to sustain before taking any chances in getting bargains in seed at the expense of getting poor germinating quality.

Such a nodding army of onion "heads" is a refreshing sight to the grower

I could easily give details of quite astonishing production from my kitchen garden of less than one-tenth acre in extent during the past season; but I will cite only last year's yield of 25 pounds of green shelled beans from 160 square feet of garden space, the same being inter-planted with lettuce and cabbage, which supplied the family and laying hens for several weeks.

So I might continue with glowing accounts of all the staple and a number of special garden crops, which all help to make our table a joy to the hungry, active workers; and the sales from our little garden reduce grocers' bills to the minimum.

Time-Saving Pruning Aid



WHEN I first began to prune my trees, my saw and shears seemed out of place. When I was using the shears I had to hang the saw on my arm, and when I was using the saw I had to put the shears in my pocket.

So I took a leather belt and made a holder for my shears in this way:

I got a thin board 6 inches long, 2½ inches wide at the top and 2 inches at the bottom. Then I nailed a piece of tin to the edge, leaving an opening large enough to admit my shears, so they would slip in cutting-end first.

Then I nailed on a strip of tin so that the holder would slip on the belt. For the saw I got a piece of wire and made a loop at one end for the belt to go through, and a hook at the other end. By having the holder and hook loose I can move them wherever I wish.

ATLAS distillers GRAINS

ATLAS DISTILLERS' GRAINS contain 27% to 30% protein and 8% to 10% fat. Make bigger profits by reducing your feed cost. A post-card brings FREE circular. Write for it TODAY.

ATLAS FEED and MILLING CO.
PEORIA, ILLINOIS

Everbearing Strawberry

New fall-bearing one. Smooth and good size and color. Plants strong. $2 per 100. **Sonderegger's Earliest Blackberry** will please you. **Mersereau** stands 20 below zero, big yielder. **Beebe's Early Prolific Tomato**—2 weeks earlier than any other. Bears until frost. Apple trees 90c for 10, 1 year from graft or bud. Big Catalogue Vegetable and Flower Seeds sent free.

Sonderegger Nurseries & Seed House
38 Court Street BEATRICE, NEB.

Trees and Seeds That Grow

20 Packets Seeds—10c

We want every reader to test **"HARRIS SEEDS THAT HUSTLE."** Send 10c. now—before you forget for this mammeth collection. We send you 20 separate packets finest varieties—one each—of **Beets, Carrot, Cabbage, Celery, Cucumber, Lettuce, Cress, Muskmelon, Watermelon, Onion, Parsley, Parsnip, Radish, Salsify, Spinach, Tomato, Mixed Poppies, Giant Cosmos, Double Jap Calendula** and **Children's Botanical Garden,** a curiosity collection of flower seeds. With this collection we send rebate check for 10c. and big catalog of world's finest seeds.

HARRIS BROS. SEED CO., 132 Main St., Mt. Pleasant, Mich.

GRASS SEED FREE SAMPLES Wonderful Value Wholesale Prices Profits Divided

with customers. Don't fail to investigate these bargains. Recleaned Tested Timothy $3.25 bu., Clover $14 to $16, Alfalfa $8.90, Alsike Clover and Timothy, $5.50. Sweet Clover and other Grass and Field Seeds at proportionately low prices.

All sold subject to State or Government Test under an absolute **money-back guarantee.** We are specialists in grass and field seeds. Located so as to save you money and give quick service. Send today for our big profit-sharing, money-saving Seed Guide which explains all, free. Buy now and save money. Write

American Mutual Seed Co., Dept. 642 Chicago, Illinois

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"IF YOU CANNOT FIGHT, FEED A SOLDIER"

Plant our Choice Iowa Seeds. Reduce your living cost and produce food for the nation. Our catalog tells you how. It is free. Write for it today. Address

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Biggest Bargain this season. Tested quality, absolutely Guaranteed. Sold subject Government test. Don't fail to write now for Free Grass Seed samples. We want you to see our quality, as we can save you money on our field seed. No risk buying from an old established Seed Company. Your money back if you want it. Satisfaction our first aim. Clover crop short. Write before advance and compare our seed with the best. You will save money. Samples free, also big 116-page catalog.

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and Packet Flower Seed FREE

FOR 30 years I have sold reliable seeds. Thousands of customers testify to this. My seeds not only grow, but produce big yields. They must make good or I will. 31st annual catalog now ready. Write for copy.

Lists All Kinds of Farm Garden and Flower Seeds

The best arranged, most comprehensive and easiest catalog to order from ever issued. A few specialties are:

Certified Seed Potatoes
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Send postal today. Mention this paper. Will include packet flower seeds.

L. L. OLDS SEED COMPANY
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SEEDS

Fresh, Reliable, Pure
Guaranteed to Please

Every Gardener and Planter should test Our Northern-Grown Seeds.

SPECIAL OFFER

FOR 10c we will mail postpaid our FAMOUS COLLECTION

1 pkg. 60-Day Tomato	20c
1 pkg. Princess Radish	10c
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1 pkg. Early Arrow-head Cabbage	15c
1 pkg. Fullerton Market Lettuce	10c
Also 12 Varieties Choice Flower Seeds	25c
	$1.00

Write today! Send 10 cents to help pay postage and packing and receive the above "Famous Collection" and our New Instructive Garden Guide.

Great Northern Seed Co.
202 Rose St. Rockford, Illinois

"Do Your Bit"
By Planting a Garden

This must be another big garden year. You must help feed millions of people. If you have only a few feet of ground, raise vegetables and fruits.

STORRS & HARRISON
Seed and Plant Annual

tells how to make a garden, what to plant, and how to plant it. Lists everything for garden, orchard, lawn. Send for a copy.

The Storrs & Harrison Company
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EVERGREENS

Grown by Iowa's Evergreen Specialist. Strong, hardy, well rooted. Four times transplanted.

PAY ONLY FOR TREES THAT GROW Send half cash with order. Hold balance until next October. Then deduct for trees that failed to grow. Fairest offer ever made. Evergreen bargains from $1.50 per hundred up. Write for catalog. Real bargains in fruits and flowers.

Earl Ferris Nursery Co., 295 Bridge St., Hampton, Iowa

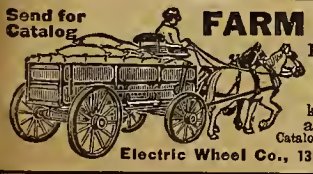
CLOVER AT WHOLESALE

We save you money. Buy now before advance. Crop short. We expect higher prices. Don't buy Field Seeds of any kind until you see our samples and prices. We specialize on Guaranteed Quality, Tested Clover, Timothy, Alfalfa, Sweet Clover and Alsike; sold subject to your approval and government test. Write today for samples, special prices and big Profit-Sharing Seed Guide.

American Mutual Seed Co., Dept. 142 Chicago, Illinois

Send for Catalog

FARM WAGONS



High or low wheels—steel or wood—wide or narrow tires. Wagon parts of all kinds. Wheels to fit any running gear. Catalog illustrated in colors free.

Electric Wheel Co., 13 Elm St., Quincy, Ill.

VICK'S GARDEN and FLORAL GUIDE FOR 1918

ITS FREE Several New Features. WRITE TODAY

Based on our experience as the oldest mail order seed concern and largest growers of Asters and other seeds in America. 500 acres and 12 greenhouses in best seed growing section. Our Guide is full of helpful information about planting, etc.—an invaluable aid to a successful garden. Illustrates and describes leading Vegetables, Flowers, Farm Seeds, Plants and Fruits. With our Guide, the best we have issued, we will gladly include interesting booklet, "A Liberty Garden." Both are absolutely free.

Send for your copies today, before you forget.

JAMES VICK'S SONS
34 Stone Street, Rochester, N. Y.
The Flower City

EARNS $1,500 EACH WINTER

For two successive years, James I. Sherman has earned more than $1,500 during the winter months. He is on his way to reach this amount again this winter and, unless something unusual occurs, will greatly exceed it. He calls on people whose subscription to FARM AND FIRESIDE is about to expire and renews it. He also presents our striking offer to new readers. What he has done, you can do. If you can devote all or part of your time to our work, write us. We will give you the same proposition we offered him.

FARM AND FIRESIDE, Agents' Department, SPRINGFIELD, OHIO

$500 PER ACRE

From STRAWBERRIES

Growers who use Kellogg Pedigree Plants and follow the Kellogg Way make $500 to $1200 per acre.

FREE BOOK TELLS HOW you can make big and quick profits growing and selling strawberries the Kellogg Way. Pictures and fully describes the world-famous Kellogg Strawberry Gardens, also the wonderful Kellogg Everbearing Strawberries. Offers big cash prizes to boys and girls, and gives the women folks 80 recipes for making delicious strawberry dainties. Write today—it's FREE.

FREE AND POST PAID

R. M. KELLOGG COMPANY
Box 470 Three Rivers, Mich.

WRITE FOR IT TODAY

Garden Fencing Insurance

By William Anderson

I AGREE perfectly with H. C. Jenks in a recent issue of FARM AND FIRESIDE on the importance of enclosing a farm garden with substantial hen-, hog-, and dog-proof fencing. When we confine our farm flocks of poultry in yards for a considerable part of the summer season, as is necessary if we are to have a good garden, we lose the help of our poultry as conservers of waste grain and their good offices as destroyers of insect enemies in the orchard and fields, which is no small item.

Although a town dweller at present, I observed a number of farms last summer where first-class gardens were made safe from chickens and stock and dog marauders, which furnished the strongest possible argument for this means of protecting garden crops. These substantially fenced gardens gave the farmers and their families assurance that their labor and expense incurred for seed would not be lost. The result was that the entire family took a new and active interest in having the best possible garden.

The contrast between these productive fenced gardens, that were a joy to every beholder, and the unfenced gardens in the same communities was enough to convert every fair-minded observer.

The refrain from the owners of the neglected excuses for gardens which were common runways for dogs, poultry, and stock at large on the highways was: "Oh, what is the use of spending time on a garden to be ruined by hens and dogs?" Then would come the

A well-kept, graceful driveway adds a finishing touch to a farm entrance

explanation: "If I had time to fence my garden like Neighbor Blank has done, the matter would be different."

My own case proves that the same fencing rule holds good for the backyard and village gardens. I have a strong, tight wire fence around my suburban garden, and I know that the labor and expense going into it were good investments, for it was made safe from neighbors' hens, dogs, and for the most part from unruly children.

One garden crop grown the past season shows what can be done. From one bushel of potatoes planted our supply of potatoes of excellent quality for a good-sized family was secured from June 17th to January 1, 1918. From a nickel's worth of parsnip seed I have a bushel of fine parsnips, and from one quart of onion sets one bushel of onions, and so on down the line.

If we expect to reduce the cost of living we must all do our part, and prove the saying, "God helps those who help themselves."

With the helpful suggestions in FARM AND FIRESIDE, I know good results will follow for townspeople who can arrange for gardens, as well as for country people.

Lots of us try to raise stuff we know nothing about, with varying success. If I find a certain variety of seed a good producer I stick to it. I now work in the city every day, but I like to work in my garden on Saturday afternoons and in the evenings, for my health is improved and our table fairly groans under its load of garden delicacies.

No Money In Advance

The Great Majestic Cream Separator — 100% Efficient

Sensational Offer!

Only Hartman's with their $12,000,000.00 capital, their tremendous organization and over two million customers are capable of such a record breaking offer as this: Order any size **Majestic Cream Separator** you want—no deposit—no C. O. D.—no security. When the separator comes, work it 30 days and if you are not fully satisfied with it, send it back at our expense and you will not be out one cent.

Built For a Lifetime of Service

If you are convinced that the "Majestic" is a wonderful bargain and just the Separator you want, then keep it and pay one-sixth 60 days after arrival and balance in 5 equal payments at intervals of 2 months each—giving you a

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Farm Credit Terms

Full Year To Pay

Made In Four Sizes: 375, 500, 750, 1,000 lbs. Capacity

Has all latest improvements including remarkable inside oiling device and improved separable disc bowl

We make this remarkable No-Money-In-Advance, Year-to-Pay Offer because we want you to learn from your own experience that here, at last, in the "Majestic" is the perfect separator—a masterpiece of mechanical skill and ingenuity—a real triumph achieved in Cream Separator construction.

Test it on warm or cold milk and find out by actual results how the "Majestic" skims down to the last drop—note the fine condition of the cream—how much quicker it skims than any other you have ever seen. You will find it just the separator you want. Our free trial without money or security offer proves it to you.

Send For FREE BOOK

Don't buy a Separator until you get all the facts about the great "Majestic." Learn all about this wonderful Separator. Compare our low price. The "Majestic" on our **year-to-pay, farm-credit-terms** costs less than others ask all cash for. Get the proof. It's in this book. Mail coupon.

THE HARTMAN CO.
4039 La Salle St.,
Dept. 1176 Chicago, Ill.

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THE HARTMAN COMPANY,
4039 La Salle Street, Dept. 1176 Chicago

Without obligating me, send me your Cream Separator Catalog and particulars of your No-Money-In-Advance, full Year-to-Pay Farm Credit Selling Plan on Cream Separators.

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Address.....

FIELD SEEDS AT WHOLESALE PRICES

We save you money on your Seed Bill. Write for our Special Money-Saving Price List and get our reduced prices on Best Quality Guaranteed Seed. You should know about our low prices. Write at once and be convinced. Everything Guaranteed equal to Samples or Money Refunded. Don't pay double profits on Grass Seed. Our seeds are sold subject to Government test. Have low prices on Seed Corn, Oats, Wheat, Speltz, Barley, Cane, Millet, Cowpeas, Rape, Vetch, Sudan Grass, Potatoes, Artichokes and all Farm and Garden Seeds. Don't order until you write for big 116-page catalog. Free samples and special low prices on seeds you require. Will Send Free 60-page book on Growing Alfalfa to those who ask for it. Write at once, as we can save you money.

A. A. BERRY SEED CO. BOX 242 CLARINDA, IOWA

TIMOTHY $3.15 PER BU. AND UP
ALFALFA $9.00 PER BU. AND UP
CLOVER $14.40 PER BU. AND UP
ALSIKE & TIMOTHY $5.50 PER BU.
SAMPLES And 116 P. Catalog FREE

KEROSENE is the Economical, Successful Fuel for the 3 and 6 H. P. "Z" Engines.

3 H.P. $89.00
6 H.P. $156.00 Both With Throttling Governor
1½ H.P. (Gasoline) $48.50 on skids
All F.O.B. Factory. With BUILT-IN MAGNETO

ECONOMY and simplicity combine to make the "Z" Engine the one real engine for your use. The 3 and 6 H. P. sizes work on *kerosene*, at about one-half the cost of gasoline and you get the same power per gallon. Yes, they will operate on gasoline too. The 1½ runs on gasoline only.

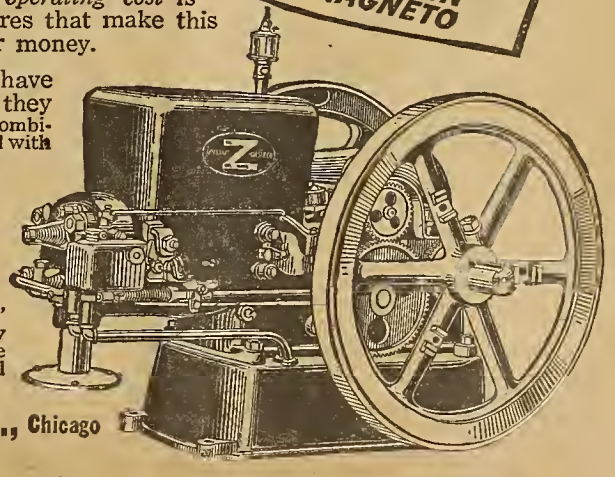
More power at a *lower operating cost* is only one of the many features that make this engine the best buy for your money.

Thousands of farmers have proved by purchase that they believe it to be the one best combination of engine value—compared with all engines irrespective of price.

See the Fairbanks-Morse "Z" Engine in action and you'll surely buy it.

The service you get when you buy from your dealer

Your local dealer has a type "Z" in stock—waiting for you. Buy from him. He is prepared to give prompt delivery and personal service.



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Manufacturers

Read about Moore Haven, Fla., where soil is worth $18 a ton as fertilizer!

If you read the editorial pages of the Saturday Evening Post,—you probably know about Moore Haven, Fla., where a woman is mayor.

Would you like to learn more about this magical farm-town?—How we get four big crops a year—without fertilizer?—Why our produce is ready for the market when prices are highest?

Would you like to learn how analyses by Prof. Wiley of the State Agricultural Department have shown that our soil here is worth $18 to $20 a ton as commercial fertilizer, at present prices?

Would you like to test some of this soil yourself, on your own farm?

For 10c, we will send you the sample of soil—and we will also send you 10 issues of our weekly newspaper. If that 10c does not bring you $1 worth of interesting ininformation (you to be the judge)—we will refund you your money without question.

Mail this Coupon now

Mail this to MOORE HAVEN TIMES, Dep't 113 Moore Haven, Fla.

As per your offer, you may send me your weekly newspaper for 10 weeks, and sample package of your soil. I enclose 10c in cash (or stamps). If I do not think the soil and the newspapers are worth a whole dollar to me, you are to refund my dime.

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IRON AGE

Farm, Garden and Orchard Tools

Answer the farmers' big questions, How can I grow crops with less expense? How can I save in planting potatoes? How make high priced seed go farthest? The

IRON AGE Potato Planter

solves the labor problem and makes the best use of high priced seed. Means $5 to $50 extra profit per acre. Every seed piece in its place and only one. Saves 1 to 2 bushels seed per acre. Uniform depth; even spacing. We make a full line of potato machinery. Send for booklet today.

No Misses
No Doubles

Bateman M'f'g Co., Box 38-B, Grenloch, N. J.

PEACH & APPLE TREES 2c & up

Pear, Plum, Cherry, Small Fruits, Strawberries, Vines, Nuts, etc. GENUINE HALE BUDDED from Bearing J. H. HALE TREES. GENUINE Delicious APPLES. Write for CATALOG FREE.

TENN. NURSERY CO., Box 52, Cleveland, Tenn.

CLOVER and TIMOTHY $5.50 BU.

Greatest Grass Seed Value Known—Investigate. Alsike Clover and Timothy mixed—the finest grass grown for hay and pasture. Cheapest seeding you can make, grows everywhere. You will save 1-3 on your grass seed bill by writing for free sample, circular and big Co-operative Seed Guide, offering Field Seeds, all kinds. Write today.

AMERICAN MUTUAL SEED CO., Dept. 542, Chicago, Ill.

LAND 20, 40 or 80 acre tracts in Michigan's best counties. $18 to $30 per acre. Easy payment plan. Big free booklet. SWIGART LAND CO., Y1250 First Nat'l Bank Bldg., Chicago, Ill.

We Want To Start 100 New Agents

(men and women) this month, taking orders for trees and shrubbery for Spring delivery, and offer special inducements for quick action. Pay weekly. Write for outfit.

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40 designs—all steel. Handsome, costs less than wood, more durable. We can save you money. Write for free catalog and special prices.

KOKOMO FENCE MACH. CO. 427 North Street, Kokomo, Ind.

APPLETON WOOD SAWS

Safety and Service

Buy a wood saw strong enough to be *safe* under any strain and durable enough to last you for years. The Appleton has tremendously strong, rigid frame of angle steel; or hardwood, bolted, braced and mortised—doesn't get out of line. Lathe turned steel shaft. Dust proof, non-heating, self-adjusting bearings, keep saw true and steady even after years of wear.

10 sizes; tilting and sliding table types and drag circular log saws. Write for

FREE BOOKLET

Appleton Mfg. Co. 609 Fargo St. Batavia, Ill.

Taxing You for Living in the South or West

By THE EDITOR

IF YOU live in the South or the Middle West or on the Pacific Coast, you should read this article very carefully. It explains what is meant by the zone system of postage, and why you will have to pay more for your magazines than if you lived in the East.

The zone system of postage in effect inflicts a punishment upon you for living in the South or West. If you believe that there is no reason for you to be punished for living in the South or West, then you agree with the position which the magazine publishers upheld before Congress.

But the publishers were not strong enough to influence Congress. If you are to be protected from this injustice, *you* will have to take the matter up personally with your senator and congressman. Congress does not care much for any publisher or group of publishers: it cares a great deal for *your* vote.

When this country was very young, Congress decided that magazines and newspapers should be carried through the mails at a flat rate of one cent a pound, regardless of the distance. (Canada has a similar law, but charges only half a cent a pound.)

The argument was that a big country like this needed all possible freedom of inter-communication to bind it together. The more a man in the East wrote to his friends in the West; the more interchange of information there was between North and South—whether by letter or through the printed pages—the better country we would have.

So Congress argued in the early days. And it decided that every United States citizen, whether he lived in the city or the country, whether along the Atlantic or the Mississippi or on the Pacific, should have his letters delivered to him, and his magazines, at a fixed flat rate.

You will have to admit that this system has worked pretty well in this country. Never before in the history of the world have a hundred million people, stretched out over so vast a territory, been held together as a unit. Always there have been different dialects and customs and ideas. But we Americans have no dialects; we have no geographical divisions of customs or interest. We are *one* people. And to the magazines belong some credit for this.

Certain businesses drift naturally to certain centers. Thus Pittsburgh is the center of steel, and Detroit the center for automobiles, and New York is, and will continue to be, the center for publishing.

The question of a proper rate of postage on so-called second-class matter is a very perplexing one. Twice Congress has appointed commissions to investigate it. Both commissions reported unanimously against a zone system.

The last commission, headed by Justice Charles E. Hughes, said: "It would seem to the commission to be entirely impracticable to attempt to establish a system of zone rates for second-class matter."

The magazines want to pay their way in the world; they ask for no favor—for nothing but a fair recognition of their service to the nation, and the opportunity of continuing to serve.

They feel—and they believe you feel—that Congress made a mistake in hastily casting aside the recommendations of its two commissions, and—in the hurried last hours of the session—jamming through a system that works an injustice to a large proportion of the American people. They believe that it is unfair to lay a penalty against any American citizen because he happens to live at a distance from New York.

If you believe this, if you, who live in the Middle West and the South and Far West, believe in the equal rights of every citizen to have his mail carried at the same rate, we ask you to join with us in petitioning Congress to reconsider its zone postage bill. We ask you, not for our sake, but for your own, to write a letter to your congressman and one or both of your senators. Simply say:

"Senator John Smith, Senate Chamber, Washington, D. C. My dear Senator: I believe the zone system of second-class postage is wrong in principle, and that Congress ought at once to reconsider its action in the matter."

Borrowing Money from Uncle Sam

[CONTINUED FROM PAGE 9]

Liberty Loan competition, it would have been possible to adequately finance the farm loan system during the first six months of its life. It is the ultimate purpose of the Federal Farm Loan Board to dispose of these securities to the people exclusively over the counter. But that cannot be done until the public comes to appreciate the value of these bonds. So far, of the $21,500,000 of bonds sold almost $3,000,000 has been sold to the people direct by the federal land banks. The number of applications coming to the banks for these securities is constantly and rapidly increasing, and the Board feels confident that it will not be long until a market will have been created that will consume these securities over the counter at the rate of at least $10,000,000 per month.

Federal Farm Loans Made up to November 1, 1917

The following tabulation shows the amount of money paid out to farmers, by States, on first mortgage loans at five per cent up to November 1, 1917:

FEDERAL LAND BANK OF SPRINGFIELD, total, $304,065; Maine, $71,300; Massachusetts, $143,265; Rhode Island, $8,360; Connecticut, $14,800; New York, $66,350.

FEDERAL LAND BANK OF BALTIMORE, total, $1,193,950; Pennsylvania, $141,800; West Virginia, $113,350; Virginia, $877,600; Delaware, $2,600; Maryland, $58,600.

FEDERAL LAND BANK OF COLUMBIA, total, $629,280; North Carolina, $284,615; South Carolina, $271,065; Georgia, $40,700; Florida, $32,900.

FEDERAL LAND BANK OF LOUISVILLE, total, $1,391,900; Tennessee, $273,900; Kentucky, $358,500; Indiana, $742,700; Ohio, $16,800.

FEDERAL LAND BANK OF NEW ORLEANS, total, $1,121,515; Alabama, $312,900; Louisiana, $350; Mississippi, $808,265.

FEDERAL LAND BANK OF ST. LOUIS, total, $882,515; Illinois, $143,575; Missouri, $431,260; Arkansas, $307,680.

FEDERAL LAND BANK OF ST. PAUL, total, $2,726,200; North Dakota, $938,300; Minnesota, $694,900; Wisconsin, $445,200; Michigan, $647,200.

FEDERAL LAND BANK OF OMAHA, total, $1,093,790; Iowa, $48,800; Wyoming, $134,600; South Dakota, $286,500; Nebraska, $623,890.

FEDERAL LAND BANK OF WICHITA, total $5,869,700; Kansas, $3,039,000; Oklahoma, $1,319,300; Colorado, $891,700; New Mexico, $719,700.

FEDERAL LAND BANK OF HOUSTON, total, $729,433; Texas, $729,433.

FEDERAL LAND BANK OF BERKELEY, total, $1,248,200; California, $970,200; Nevada, $69,000; Utah, $116,900; Arizona, $92,100.

FEDERAL LAND BANK OF SPOKANE, total, $3,849,590; Idaho, $549,595; Montana, $1,158,270; Oregon, $882,650; Washington, $1,259,075.

MAULE'S SEEDS

Once Grown — Always Grown

Insure success in your garden. Each lot of Maule's seeds is tested for vigor and growing power, and is backed by our 41 years' success as seed growers.

THE MAULE SEED BOOK

176 pages full of valuable planting and gardening information **FREE**

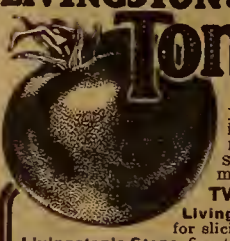
Send for it today.

Include 10c and we will send you a packet of specially selected pansy seeds—a generous assortment of beautiful Giant pansies—the largest known.

You save money and get fresh seeds when you buy from

WM. HENRY MAULE, Inc.
2129 Arch Street Phila., Pa.

LIVINGSTON'S FAMOUS Tomatoes



are favorably known. Many of the best sorts were introduced by us. We grow more high-grade tomato seed than any other seedsman in the world.

TWO BEST VARIETIES

Livingston's Globe, finest pink, for slicing and shipping, **pkt. 5c.**

Livingston's Stone, finest bright red, for canning and catsup, **pkt. 5c.** Both immense yielders. Try them.

New 112-Page Catalog FREE

Fully describes the best varieties of vegetables and flowers. Gives 300 true-to-nature illustrations and quotes honest prices for quality seeds. Tells when to plant and how to grow big crops. Write for your FREE copy To-Day.

Livingston Seed Co. 307 High St. Columbus, Ohio

There Is Money in strawberries for you—yes, big money on a few acres; if you start with the right kind of plants—the sure grow kind.

Baldwin's Big Berry Business

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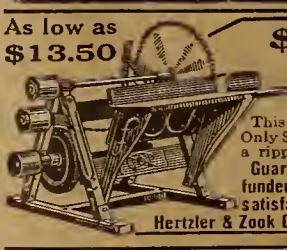

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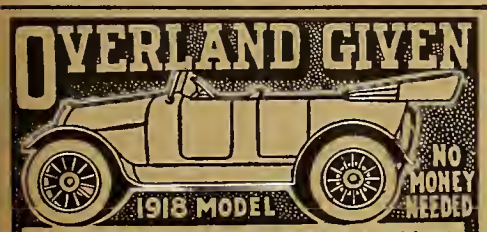

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Ask about the Ro-San Washstand—Hot and Cold Running Water Without Plumbing

Getting Big Early Hatches

By C. L. Hobb

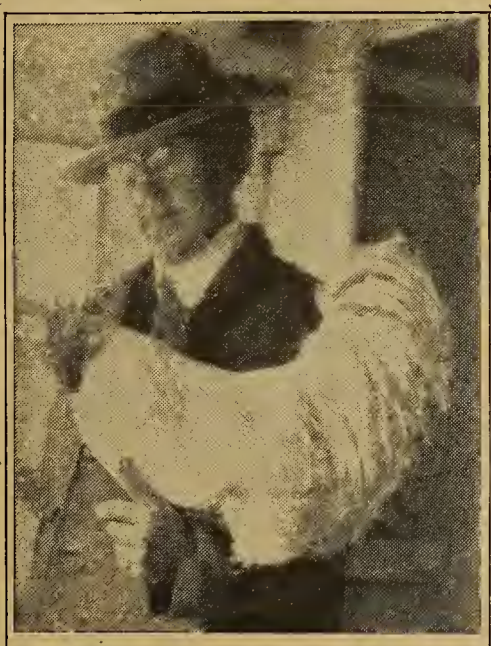
INCUBATORS of all types have to bear a lot of blame undeservedly when the eggs alone are at fault. Here are two examples from my own experience:

Last year I set an incubator with 200 eggs—100 from two different flocks. From one lot I got an 80 per cent hatch, and from the other 9 per cent. Both parties from whom I purchased eggs were selling and shipping eggs away for hatching in considerable quantity, and both flocks had farm range. The eggs were delivered to me in baskets without experiencing any of the common dangers from shipping or any chance to get damaged. The fertility of the eggs in the poor hatching lot was wholly at fault. Some years previous, I bought eggs for hatching in my incubator from two other farm flocks, and one lot hatched over 75 per cent, and the other under 40 per cent.

Eggs like one at left sell and hatch better than over-long or round ones

I find that free-range farm flocks produce weak and infertile eggs about as often as town flocks kept in confinement; and anyone who has not made a careful test of his eggs for fertility before setting an incubator may expect an expensive surprise at hatching time.

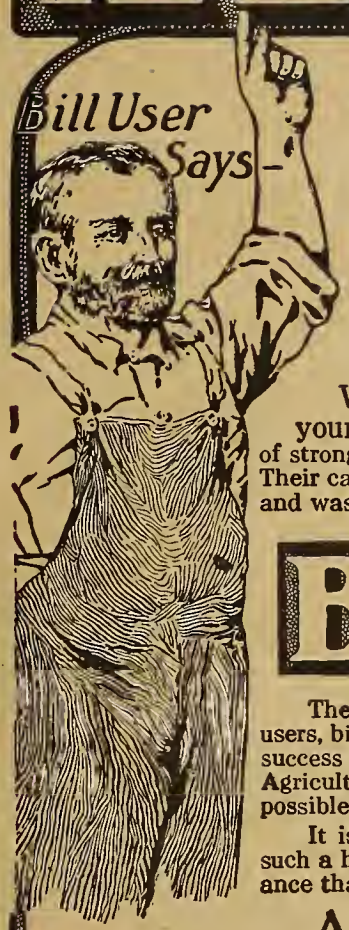
Healthy hens kept strong and vigorous with exercise and correct feeding are one essential to good hatches. And another just as important is cock birds equally fit. Don't expect good hatches from hens that are mated to cocks or cockerels that have been pampered and stuffed and closely confined for weeks during the fall and early winter in preparation for exhibition. Such males are no better than capons.



Where birds are trained to pose attractively, more show ribbons can be won

My experience is that hens that have been laying only a few weeks furnish higher fertility in their eggs as a rule than those having laid heavily for months. I find it far better to separate one or more pens of my best breeding hens and handle them to insure their laying not over a month before hatching eggs are wanted. When kept thus for breeders their feed bill is considerably less, as they can be kept largely on screenings and cheaper grains, and should be kept scratching most of the time in deep litter for grain. The exercise thus enforced puts them in hardy, vigorous condition. The male with which the breeding hens are to be mated should also be made to scratch actively for his grain, and when the breeding stock is handled as I have recommended the male can be allowed to run with the breeding hens throughout the winter, and on account of the better acquaintance of the birds the fertility of the eggs will be greater.

HATCH EVERY EGG



"Why gamble with valuable eggs and more valuable time experimenting with an incubator—learning to "run" it? It's business with you from the start with a **Buckeye** Incubator, because all the experimenting has been done for you.

"You don't **guess** on the hatch, you **get** it—to the full number of hatchable eggs the first time and every time. And good strong chicks too, that grow to quick maturity."

Whether you are a beginner or a big operator, your problem is the same— to get the full hatch of strong chicks. A hatch of weak chicks is worse than none. Their care is a waste of feed and time. You avoid the risk and waste with a

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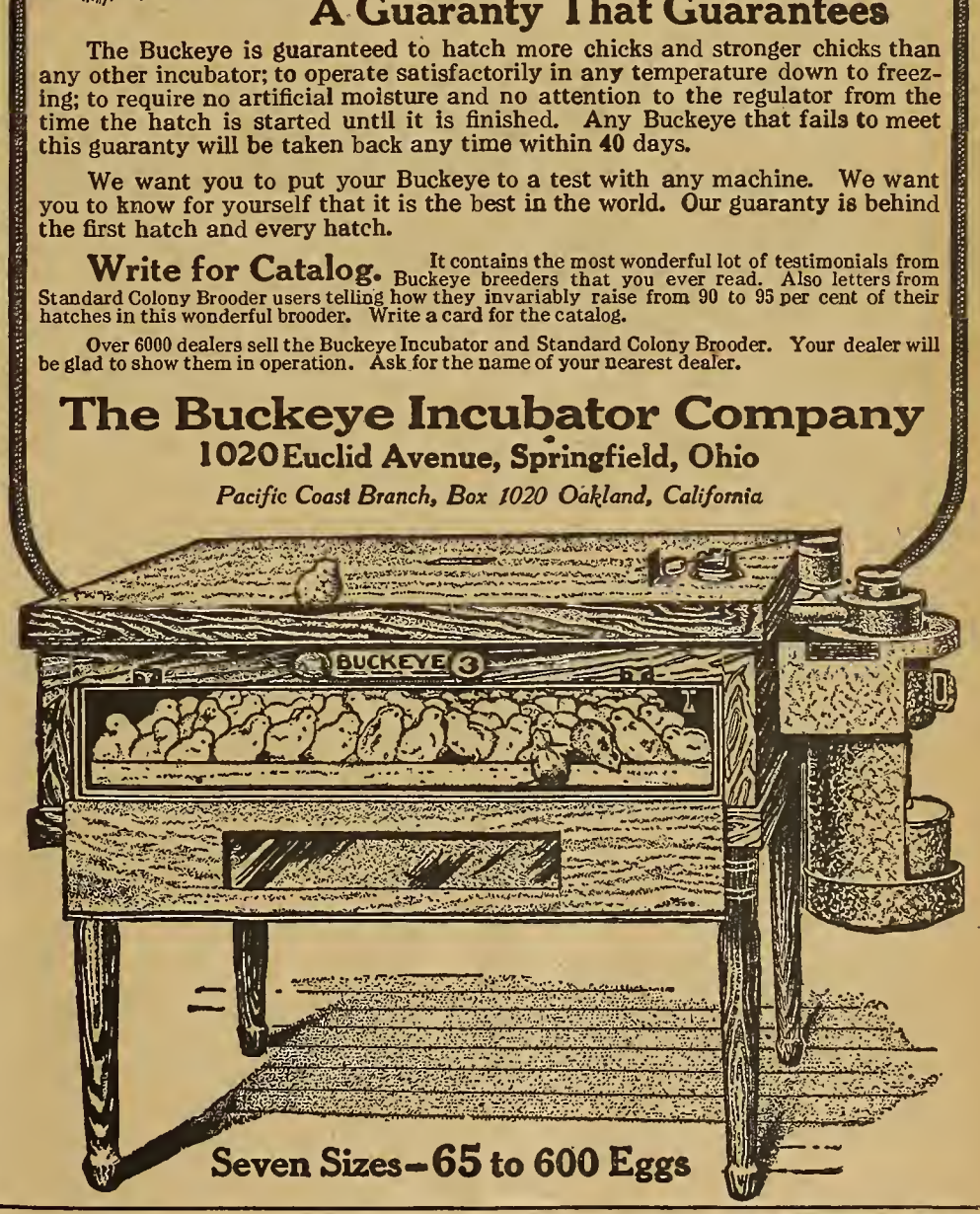

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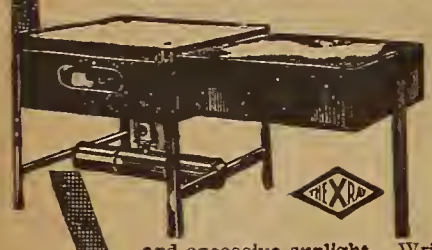

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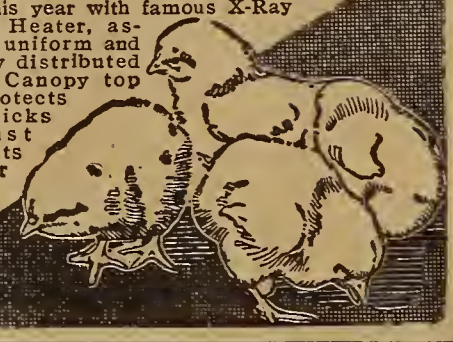

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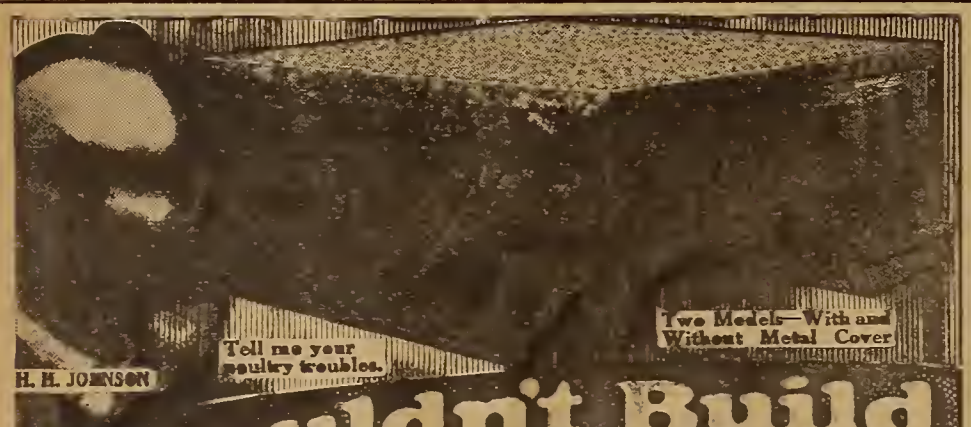

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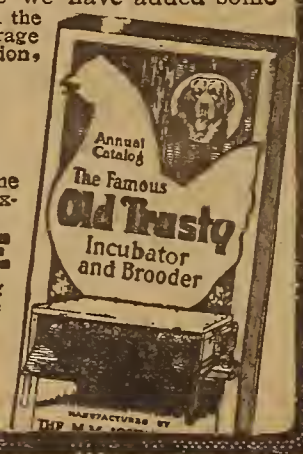

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Bred-to-Lay versus Fancy

By A. J. Kyle

NOT long ago an experiment station poultry expert put this question to me: "Do you think we are helping or injuring the poultry business by our experimental work? This question is prompted by several recent articles that have been published in some of the poultry magazines." I answered: "No harm at all, and a great deal of good."

I think it may be possible that the egg-laying contests have hurt the fancier to a certain extent, for very few of them are represented at the contests, and the natural inference is that stock that has been inbred for years for feathers alone will not make a very good showing at a contest of this kind. Neither would the average bird bred for egg production alone show up very well at a Madison Square show. Both kinds of poultry have their places.

Until a short time ago, if we wanted new blood we sent to the fancier. The experiment stations have taught us that egg production is a matter of breeding, consequently the man who cannot afford to keep hens for their looks alone sends to the breeder with the high-egg average for new blood, and thus increases his egg production. Our own experience with exhibition stock leads us to think that any man with good laying stock cannot afford to run the risk of ruining it by breeding in exhibition blood. It can be and is done by some breeders with good results, but it takes time and expert knowledge, and cannot be safely done in a year or two. It is cheaper and safer to buy of the man who is trapnesting and pedigreeing his stock.

Mother of the winners of the "high pen" honors in last contest, Storrs, Connecticut

Cheaper because the fancier's prices are based on inflated values, for if one bird beats another at a poultry show, its price may run up into the hundreds of dollars, but it is worth no more to eat, nor, as a rule, will the exhibition pullet lay as many eggs as the average hen. Just because you and I like to beat someone else at the local poultry show with our birds, the fancier sells his stock and gets his prices.

How about the bred-to-lay man? For every man that shows birds there are a hundred who do not. They keep hens for their eggs; in other words, they keep them with the idea of getting enough from them to pay their keep, and some profit besides. These are the people that the experiment stations are teaching to buy of the bred-to-lay man. What is his stock worth to them, taking it for granted that his birds are not able to win at a show? We should say from $5 to $10.

A good cockerel who is pedigreed from high record hens for several years will increase the egg production of the average flock to that value, and more. There are no inflated values here. But what can you get for $5 or $10 from the fancier? A cull, that is all. The bred-to-lay man can sell his stock cheaper because he is making a profit on his eggs the year around. There are more customers and, as a rule, he can sell his stock without advertising.

There is little or no profit for the small breeder in exhibition stock, but there is always a profit for the man whose hens lay an average of 180 eggs or over a year. If you want eggs, breed for them, just as the dairyman breeds for milk and butter; for it's eggs in one case and milk in the other that pay the feed bills.

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Amazing Results Reported

There are many other features which help to produce results that have startled poultry raisers everywhere. Automatic Moisture Vaporizer supplies moist, mild heat from above, exactly as the hen does. Complete circuit radiator supplies even heat throughout egg chamber; tall chimney gives perfect draft; hinged cover—no heavy tray to lift out—eggs turned and cooled quickly without bother; double glass in top means visible egg chamber; only 3 minutes a day required to operate.

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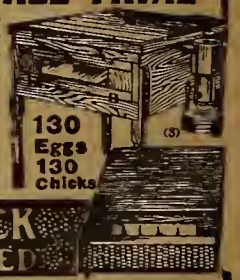

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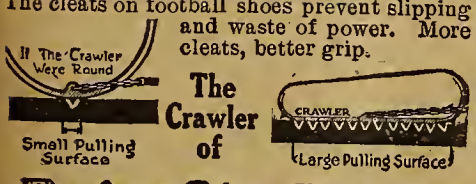

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Cent Profit Each Day

By B. F. W. Thorpe

IT IS asking considerable to expect a profit in October from hens that have been laying for a full year, but the Barred Rocks, Reds, Leghorns, and Wyandottes in the All Northwest Egg-Laying Contest averaged but little short of a daily profit of one cent each above feed cost during the last two weeks of that contest, which ended October 14, 1917. The average egg production of the four breeds named for the last fourteen days of the contest was:

Rocks	5.86 eggs;	feed cost, 9.90 cents
Reds	5.86 eggs;	feed cost, 10.75 cents
Leghorns	5.57 eggs;	feed cost, 9.98 cents
Wyandottes	5.12 eggs;	feed cost, 9.64 cents

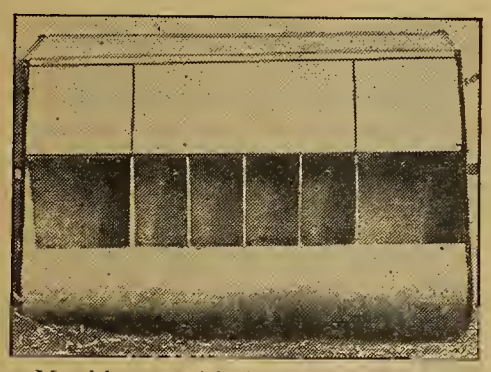
The selling price of the eggs during the same period was 50 cents per dozen.

All praise to these four popular breeds, which were able to show returns of nearly a cent a day above feed cost after having been in a laying race for a year!

Metal Hopper of Merit

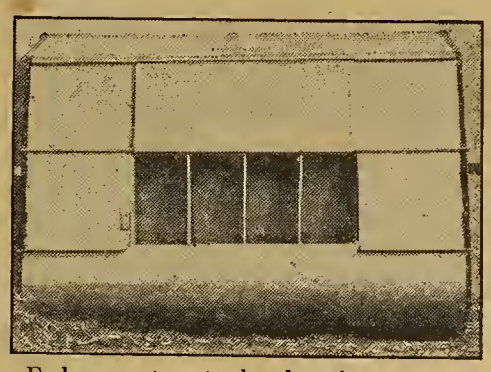
By A. L. Roat

I HAVE used many different style hoppers with various degrees of satisfaction, but most of those I have tried allow of too much waste in the litter. Hens



Metal hopper with six compartments for mash, grit, shell, etc.

seem to delight to scatter valuable feed and mash out of the hoppers. I find the loss from using several such unsuitable hoppers is more than enough to install hoppers that prevent such loss.



End compartments closed to shut out rats and mice at night

The hopper illustrated has given me satisfaction ever since it has been in use on our farm. It is of metal, with six separate compartments. One end bin we use to hold mash feed, and the other meat meal. Those between contain oyster shell, charcoal, and two varieties of grit. A cover in three sections can be used to close the bin at either end and the four center bins or combinations. The pocket of each compartment is deep and the feed is eaten through a wire-screen follower. The loss of material from this hopper is almost nothing.

A Million Eggless Farms

IT HAS recently been found that there are a million and a half farms in this country where not a hen is kept and every egg and chicken used on the table must be purchased. If these eggless farms would this year raise 100 pullets, their eggs produced next year would furnish 60 dozen eggs for each family in the United States; and an equal number of cockerels would furnish Sunday dinners to every American family twice a month throughout the year. Help rout the Kaiser with hens!

WHEN selling birds, inform the buyer as to previous method of feeding. A radical change of feed may so upset them as largely to depreciate their value and laying ability.

Winter Is When Stock Get Out of Fix

Yet—healthy, thrifty animals mean more to you right now than at any other season of the year. It's because you are producing pounds of pork, beef, butter and milk with grain, hay and fodder, the products of your summer's toil. That's why your stock should be in prime condition and free from worms.

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Speeding Up Housework

How a Few Hands Can Manage to do the Work of Many

By MONICA KELLY

TWO weeks after war was declared my oldest son enlisted in the army. Shortly thereafter my daughter took a short course in Red Cross work; and, because of her thorough training in home economics, she became leader and instructor in our county chapter of Red Cross. Although she gave her services gratis, the work took up practically all her time, just as though she were teaching school or holding any other salaried position.

Good crops and high prices in late years have brought us prosperity, and I thought I had come to the point where I could have a helper to aid me in the housework. I had always done all of it myself with the aid of my children. But when my grown son and daughter were called into the nation's service I found that although I had money to pay the wages of a hired helper I could not find one. The good wages and great demand for girls in the city had drawn off many, and those that were left were sorely needed in their own homes, where competent hands were as scarce as they were in my own home.

My husband and I talked it over.

"If there isn't any way of getting someone to help you do the work," he said at length, "the only thing to do is to lighten the work."

"But instead of less work there is going to be more," I told him. "We have to watch the garbage pail and conserve in every possible way, get used to new methods in cooking, and even have to add new jobs to our regular work. For instance, I intend to make soap so that no fat will be wasted in our house, and of course I want to do my share of the knitting and sewing for Red Cross."

It was this problem that I took to the Corner Club for solution.

"All the children need new rompers and dresses, the mending basket is full to running over, the curtains all need washing, I haven't read a magazine for weeks, and I'm tired all over," I finished my summary of the situation.

"I have a few suggestions on how not to get tired," said Mrs. Gilbert, and the Corner Club was immediately all attention, because no one of us gets more done, looks younger for her age, and has more leisure time than Mrs. Gilbert.

"I take a few deep breaths, hold up my head, and practice a grin. It's the best tired-and-cross tonic I know"

Take a Ten-Minute Vacation

"I'VE been married twenty-six years and I've never had what you would call a sure-enough vacation. I never get two weeks for a vacation, so I just take ten-minute vacations," she told us. "I mean that at least three times a day, just when I'm apt to get most worked up about all there is to be done, I simply sit down in my rocking-chair or lie down, or, if it's nice weather, go outdoors for at least ten minutes. It's a wonderful help. Then I always wear rubber heels, keep my voice low, because there's nothing so wearing as talking in a high voice, and I try to sit and stand in the most restful way. When things go wrong and I'm getting mad or blue, I take a few deep breaths, hold up my head, and practice a grin. It's the best tired-and-cross tonic I know of."

Then Mrs. Robert Holliday, who takes the prize amongst us for the three S's—sewing, saving, and system—volunteered her pet theories about family sewing.

"I have a regular factory method for my sewing," she said. "It is one that I hear some large Red Cross chapters are using too—at least parts of it. I buy materials in large quantities. My best months for sewing are in the middle of the winter. Early in December I sit down and plan the sewing I must accomplish during the next three months, so that I won't have much of it to do in spring and summer when the farm work is heavy.

"I make a list of all the materials I shall need, including thread and buttons in large quantities. I buy similar buttons for all the children's clothes as much as possible, because it saves time in replacing and matching. I buy outing flannel, gingham, Indian head, and other staples in large quantities, figuring enough to last me until my next sewing period.

"When I get ready to sew, I see that I have everything at hand, that my machine is oiled, fitted with a good needle, with scissors, thread, tape measure, tracer, and patterns all in their places. I cut out all the garments of one kind at a time—three rompers for Jamie, two nightgowns for Ann, three petticoats, and so on. I run up all back seams first, or seams on which buttonholes are required, because then if I am interrupted by a caller I can do the hand work while visiting. I go right through a pile of sewing and do the basting, and then stitch through a whole pile. As much as possible I follow the factory plan of completing one operation at a time on a lot of garments rather than finishing each garment separately. I think this saves a great deal of time, and it is just as interesting as the old way."

While Mrs. Holliday was talking I mentally compared her modern, time-saving method of planning and dispatching her sewing with my own haphazard way of doing things when they had to be done. I resolved that I would try her method out on the half-dozen aprons I had been hoping to find time to make soon, and which I should have undoubtedly finished one by one.

"What do you do about mending? Do you have a system for that?" asked Mrs. Powell.

"Yes, indeed, I do," was the quick answer. "You all know that I wash clothes only every other Tuesday, because it seems a waste of time to wash every week. On Wednesday I iron, and lay aside everything that must be mended. Thursday morning I mend. I sort the garments over first, and then go through the whole heap and sew on buttons. Next I do any patching or repairing of rips that can be done on the sewing machine, and finally darn the stockings."

"One of my best time-savers these days is my new war cookbook," said Mrs. Powell. "Of course our old recipes won't do at all now, and I find that it wastes time and materials trying to adapt them to Hoover rules. So I have started a new card-index cookbook, exclusively for recipes that conform to the wheat, meat, sugar, and fat saving program. The headings I use are Liberty Breads, Liberty Cakes, Sugar-Saving Desserts, Meat Substitutes, and War-Garden Recipes."

My mind was working busily by this time, and I began to see that the trouble with me was that I simply hadn't sat down and faced my wartime problem squarely. What I needed to do was to analyze it, turn it over, look at every side of it, think right through to the end of it—*and then act.* So I was quite ready to listen when Mrs. Lowry, who is our president and oldest member, and friend and adviser to every one of us, said gently:

"Do you mind if I am a little personal in my suggestions?"

Plan Every Task

AND when I assured her that, far from "minding," I should be grateful for this kind of criticism, she said:

"I remember watching you bake a cake. You went to the refrigerator, got out the butter, and set it on the range to soften; then you went back to the refrigerator and got the eggs. You next went to the cupboard and took down a bowl in which to beat the eggs, then you crossed the kitchen to the cabinet and took down the egg beater. When you were ready to mix the cake you had to go back to the cupboard for the measuring cup, and later for a teaspoon to measure vanilla. You made a separate trip for each utensil or material that you needed during the entire process. And, worse still, as you finished with the vanilla, for example, you walked back to the pantry and put it away, instead of leaving it on the bake table and putting away all the various articles at one time. You could have done it with one third the energy if you had thought out what you needed and collected your materials before you began to mix the cake, making only one trip to the cupboard, one to the pantry, and so on. When the cake was in the oven it would have taken only a few minutes to gather the soiled utensils and put them in the sink, and put away the extra materials."

After that the talk became very animated. We were all thinking of our own unsolved problems and the many things we had learned to do to save strength. Everyone had some pet device she "couldn't do without." One was a long-handled dustpan. Simple as this was, I had never thought to purchase one to save myself the effort of stooping over to get the dirt into the pan after sweeping.

One woman said that since she had put casters on her small kitchen table, so that she could roll it to any convenient corner of the kitchen, it had given her twice the service it had when it was practically stationary.

I felt much encouraged when the meeting finally broke up, and I went back to my kitchen. After fully analyzing my problem I could see that I was wasting time and using up strength in several important ways:

First, by not having all my utensils and materials at hand when I began a task; second, by leaving a task to do other unrelated things which might as well wait; third, by not using all the labor-saving devices I could secure to help me; fourth, by failing to plan my work out systematically by the day, week, and season.

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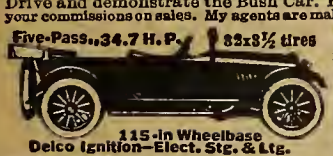

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Use More Peanut Butter

Try These New and Delicious Dishes

By ETHEL AIKEN LYONS

APPARENTLY we are just beginning to appreciate the variety of ways in which peanut butter may be used. Peanut flavor is almost universally popular, and the butter is one of the most nutritious foods. Often in cakes, cookies, or bread it may take the place of other fats entirely. It is important to use a good grade of home-made or manufactured peanut butter.

CREAM OF PEANUT SOUP—Scald one quart of milk with a few slices of onion for twenty minutes. Remove the onion and add two-thirds cupful of peanut butter which has been well blended with one scant tablespoonful of flour. Stir well until the whole is smooth and creamy. Serve at once with toasted graham or brown bread.

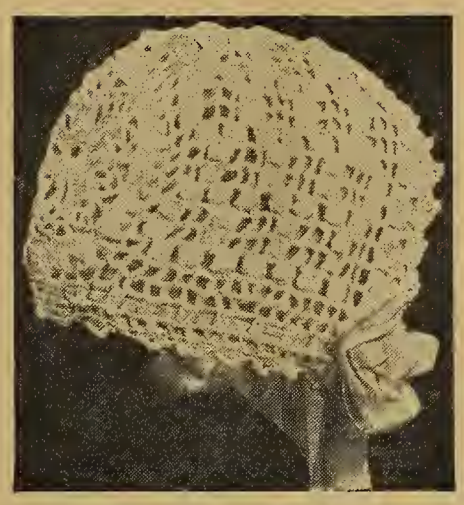
PEANUT-BUTTER NUT LOAF—The following is an excellent substitute for a meat dish: Three cupfuls of stale bread crumbs (part graham or whole wheat), two eggs, one cupful of peanut butter, one cupful of broken nut meats, one minced onion, pepper and salt to taste. Soften the bread crumbs with boiling water, add the eggs well beaten, and the other ingredients in order. Bake in a medium hot oven until set and well browned, about three quarters of an hour. Serve with or without white sauce. Good cut in slices when cold.

PEANUT GRAHAM BREAD—Three cupfuls of graham flour, one and one-fourth cupfuls of sour milk, one-third cupful of molasses, one cupful of peanut butter, two teaspoonfuls of soda, one-half teaspoonful of salt. Rub the peanut butter into the flour until there are no lumps, add sour milk, molasses, salt, and lastly the soda dissolved in two tablespoonfuls of boiling water. Beat well together, pour into greased bread pan, and bake in a medium hot oven for one hour.

PEANUT WAR CAKE—One cupful of white flour, one cupful of whole wheat, one cupful of sour milk, one-third cupful of molasses, one-half cupful of sugar, two-thirds cupful of peanut butter, one cupful of chopped dates, one and one-half teaspoonfuls of soda. Blend the peanut butter with the flour, reserving one-fourth cupful of white flour to flour the dates. Add sour milk, sugar, molasses, and floured dates, then the soda dissolved in a little boiling water. Beat all together for five minutes, and bake in moderate oven for one hour.

PEANUT DATE CONFECTIONS—A most wholesome confection for children is made by removing the stones from dates and stuffing the cavities with peanut butter. May be rolled in sugar, but for children they are better plain.

Baby's Cap



COMPLETE directions for this cunning baby's cap will be sent on receipt of four cents in stamps by the Fancy-Work Editor, Farm and Fireside, Springfield, Ohio.

In the Spy Net

[CONTINUED ON PAGE 12]

sleep now. I'll come in later to see how you are," said the girl.

"Please do!" he urged.

As Eugenia knocked at her aunt's room up-stairs she was humming an old waltz song.

"I haven't heard you sing since your poor father's death," exclaimed the invalid petulantly.

"But he always liked to hear me sing."

Unable to contradict this, the old lady began anew:

"Such a night as I had! I didn't sleep a wink—not a wink. And now it's twenty-three minutes of eight and Liza hasn't brought me up my tray!"

"She's coming. She has been busy down-stairs."

"What is she doing? Haven't you eaten?"

"Yes, I've eaten, but—"

"But what, Eugenia? You know how nervous it makes me to have people begin sentences and not finish them."

"We have a guest, Aunt Sarah. Not exactly a guest, but a man came in here for shelter from the storm. When the storm was over he started to go, but fainted; and so Sam and I took him into the down-stairs bedroom."

"Put a strange man to bed in your poor father's own room, where he spent his last days on earth?"

Miss Burr stared at her niece in disapproval. "Who is this man? some fisherman from across the bay?"

Eugenia smiled, thinking of the stranger's courtly manners.

"Oh, no. He's not from this part of the country at all."

"Then how in the world did he get here, and what is he doing on our island?" asked the aunt.

"I'm sure I don't know. He came in, soaked to the skin, and apparently worn out, so I didn't ask him any questions."

"Don't you know his name, Eugenia?"

"No."

The old woman compressed her lips.

"How old is he?"

"Thirty or thirty-one, I should judge."

"A *young man!*"

In her astonishment Miss Burr sat bolt upright.

"I think it's the most outrageous thing I ever heard of! You must resemble your father's people, Eugenia. Not to say anything against him, but New England women are—different from Southerners."

Eugenia's blue eyes twinkled.

"What would a full-fledged Southerner have done when this man fainted?"

Miss Burr adjusted her lace cap before replying.

"I certainly wouldn't have turned a dog out in a storm like this," she admitted. "But I am sure that I would have found out that man's name and his reason for being here. Eugenia, is he a gentleman?"

"Yes, even you would admit that, Aunt Sarah, although his accent is more European than Southern."

"I can never tell whether you are serious or not. Oh, I hear Liza coming"

Eugenia slipped down-stairs again

Since her father's death her desire to serve others had had little outlet, and she was glad of a change from the quiet of the big empty house. As she moved about the room, straightening a picture here and a book there, she sang again snatches of the waltz song with which she had surprised her aunt.

Several hours later, as she was finishing luncheon, Sam came into the dining-room.

"The strange gen'leman has done woke up, Miss 'Genia, and he says will you please, if it ain't too much trouble, step in to see him for a moment."

Conscious that she had been waiting all morning for this message, Eugenia went quickly into the room which had been her father's.

[CONTINUED IN NEXT ISSUE]

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Runaway Julietta

By Arthur Henry Gooden

PART VII

JULIETTA entered Maggie Wurrell's cabin without knocking, and in her face was that which left Maggie staring at her in startled silence.

"Wrap up the baby," said Julietta with a laughing kiss and a quick return to her usual self. "Come on, Maggie, I'm going to take you for a drive. I brought a wrap for you."

Regardless of protests she got the baby bundled up, got Maggie into the wrap, and hastened them both out and into the buggy. Mr. Burt had disappeared.

"This is my cleaning-up day," said Julietta a trifle grimly. "Ever so often things have to be adjusted, Maggie dear, and to-day I'm adjusting quite a few things."

"Where are you taking us?" queried Maggie as they turned into the county highway.

"Never you mind," rejoined Julietta playfully. "A surprise party."

By the time the horse turned into the Wurrell driveway she had the frightened look out of Maggie's eyes, and a glow of color in the pale cheeks. But suddenly Maggie shrank again.

"There's Pa now," she whispered faintly, "and Ma too—on the veranda. Oh, Julietta, turn around quick! I—I can't—I'm scared—"

But Julietta, cold-eyed, swung the buggy to the veranda steps, where stood the Wurrells, watching stonily.

"I've brought Maggie and the baby to see you," said she, taking the baby from the nerveless arms of Maggie and advancing toward Mrs. Wurrell. The latter drew back.

"What do you mean bringin' her here, Lizzie Dare?" was the shrill outburst. "If this ain't like your impudence!" She pointed a rage-trembling finger at Maggie. "There's no home here for that hussy, nor her child neither, so you can just take 'em—"

"Now come, Ma," Jim Wurrell's gruff voice smashed her shriller tones, "don't you get to talkin' so riled! I guess I got some say here."

Encouraged by some subtle note in the man's voice, Julietta turned to him, holding out the baby. Wurrell silently eyed the little mite of humanity, then, with a faint softening of his grim face, he thrust out one great finger to the little hand that gripped toward him.

"There's your grandchild, Uncle Jim," said Julietta, and handed him the baby.

"You, Jim Wurrell!" shrieked the older woman, pounding on the boards with her crutch. "You give back that brat—"

The man turned on her savagely.

"By the Eternal, I guess I'm man enough to welcome my own gal if she's got a mind to come home—and hold my own grandchild if I want to! You shet up!" He looked down at the baby, his rugged features working strangely, then swiftly turned and advanced to the buggy, where the white-faced Maggie still sat. "Maggie, I've acted like a skunk. I'm sorry, more'n sorry; and I'm glad Lizzie here brought you home."

JULIETTA took from her blouse the deed, as yet unrecorded.

"I'm glad, Uncle Jim," she said, her voice trembling a little, 'that—that I was right in thinking as I did about you. Aunty seems to think that Maggie has no right to call this place her home, but I think she's mistaken."

She extended the paper to Mrs. Wurrell, quietly.

"Will you glance at this, please? It's a deed showing that I have transferred all *my* right, title, and interest in this ranch to Maggie and her baby. It's perfectly legal."

"I'm all shook up," murmured Mrs. Wurrell, and fainted.

In the parlor a little later Wurrell relinquished the baby to her mother, and sat down heavily.

"I'm glad you—you found out about the ranch, Lizzie," he said dully. "I've acted like a crook—but—but it come on by degrees; I never just thought how it'd seem—well, there's a load off'n my mind, girl. I don't know—"

"Never mind, Uncle Jim. Now about—"

"That ain't all," he continued. "I got a note Andy Burt give your dad afore he died, and it rightly belongs to you. I'll go get it for you now."

He rose, but Julietta caught him in a swift, vigorous hug."

A LITTLE after eight that evening two cars drove into La Vina. In the foremost was Clay Thorpe and Wurrell. In the second sat Dean, Julietta, and another rancher. The petition had been duly signed, and the committee appointed by the ranchers was losing no time in presenting it to Andy Burt.

"You do the talkin', Thorpe," said Dean grimly.

Clay nodded, and pounded vigorously at the door. It was opened by an old woman, Burt's housekeeper.

"Is Mr. Burt in?"

"No." The woman eyed them curiously. "Ain't come about the dam, have ye?"

"Oh, Ils Sont Fameux!"

By ALICE J. CLEATOR

WHEN U. S. soldiers first in France arriving
Marched through Parisian streets in splendid line,
"Oh, ils sont fameux!" thus exclaimed the Poilus.
("They're fine!")

And we are dreaming of a coming moment,
When on "Old Glory" victory shall shine,
Then round the world shall sweep that exclamation,
"They're fine!"

"Eh?" queried Clay. "The dam? What dam?"

"Why, about ten minutes ago a man come in with word that somethin' was wrong with the reservoir—Jake Robbins, I think it was. He and Andy hustled off together in Andy's car."

Up in the hills behind town was the reservoir which controlled the waters of Cottonwood Creek. The four men glanced at each other; then, without a word, Clay went leaping down the steps, sprang into his car, and was gone.

Leaving the startled housekeeper crying vainly after them, the four clambered into Dean's car. Clay's self-starter had given him a long lead, but after cranking up, Dean whirled off in a cloud of dust; the long road seemed deserted in the moonlight, and the car leaped forward madly.

"Take chances!" roared Jim Wurrell from the rear seat. "That there Robbins means dirt, Dean. Burt was a fool fer goin' off with him—"

The rest was lost in a wild bounce of the car. Dean "took chances."

Then, with a suddenness that was startling, they swerved around a bend into the great bowl under the reservoir, and Dean bore down on his brakes.

Flooded with moonlight every inch of the scene was powerfully distinct. Ahead lay the cars of Burt and Clay, tenantless. To the right the cañon dropped steeply into the water-trickling gorge. To the left the bowl sheered up to the white concrete dam, and on its brink, sharply silhouetted in black against the sky, was the stooping figure of a man.

"It's Jake!" cried Wurrell as he leaped from the car.

Julietta had turned to the right, perhaps by instinct. There, below them in the filtering light of the moon-speared gorge, appeared the figure of Clay Thorpe stooping over a bound and motionless figure—Andy Burt!

"Stop him! Stop Jake!" screamed Julietta. "He's cutting the dam."

The three men turned and dashed madly up the steep slope. Clay looked up, waved a hand to Julietta, and with one hand pulled the half-freed Burt to his feet. But it was too late.

Careless of himself, craving only vengeance, Jake Robbins had taken that vengeance in devilish cunning. Luring Andy Burt here, overcoming him, binding him, leaving him bound in the gorge below the dam, Robbins had then gone to execute his task above. The waters which had made Burt's fortune, which had caused so much wreckage and bitterness and misery, should take his life.

Staring up, Julietta saw the whole white concrete face suddenly disappear in a great burst of dust; there was a dull, earth-shaking roar, and Julietta, flung to the ground, knew that the dam had been dynamited.

For a long moment she could not move. She heard the awful rush of the descending torrent as it thundered down into the gorge, snapping trees, hurling boulders, a mighty, leaping, white-maned flood. Then, as she darted to her feet and over the edge of the slope, she saw below her a figure struggling at the edge of the foamy waters. With that she plunged forward, not an instant too soon. Even as she gripped the hand of Clay, who pulled after him the figure of Burt, the main body of the dam, fatally weakened by the exploded hole, went out in another thunderous roar. Sliding and slipping, the three struggled up the steep side, to be pulled over the brink by Wurrell and Dean.

Oddly enough, Andy Burt was the first to recover himself.

"Come!" A hoarse shout broke from his lips as he stood up beside the exhausted Clay. "We got to open the gates to every ditch. This'll flood every foot o' land I got, crops and all."

Dean blocked him as he started to the car. Clay came to his feet, smiling grimly, and from his pocket drew a typewritten paper.

"Sign this, Burt."

"What d'ye mean?" Burt grasped his arm savagely. "Come—open all your gates, you men! You've got to do it—I'll be ruined!"

"We don't care a hang if ye *are* ruined," snarled Dean. "We've saved your worthless hide—that's all. Sign this paper and we'll help ye."

Burt waved his hands in limp surrender, then scrawled his name under those of the ranchers.

When he finished he looked up, a terrible expression on his face.

"Did—" he licked his lips nervously and went on: "Did ye see Jake Robbins? He went by us down there. The water had him."

Julietta turned away, to find Clay's protecting arm about her.

AT THE late breakfast table next morning Wurrell came in and gave Julietta, weary and heartsick, a yellow envelope.

Julietta took the telegram, and felt as though a cold hand had clamped down upon her heart. With trembling fingers she opened it, and was not surprised to find it a lengthy message, sent with utter disregard of charges:

I once told you that I would some day have my own way with you. This time your Uncle Paul wins. Helen Drake and I were married this evening. We are leaving immediately for Honolulu. Wire us congratulations at Frisco. UNCLE PAUL.

"Bad news?" demanded Wurrell, anxiously.

"Look out, she's going to faint!" cried Mrs. Wurrell.

Julietta shook her head, and slowly rose.

"What—" she paused, then a smile broke over her face, and the color flooded into her cheeks. "What did you say the Thorpe ranch number was, Uncle Jim? I—I want to call Clay."

[THE END]

Looking Your Best

In Combating Wrinkles Massage is Your Friend

By MARGARET DRUMMOND

THESE are indeed trying days for a woman's looks. And never was it more necessary to do everything that lies in our power to preserve good looks and freshness than to-day.

And inasmuch as when the war is over we do not want our fathers, brothers, husbands, or sweethearts to come home and find our good looks vanished, it behooves us to bestir ourselves and by sensible precautions preserve what we have.

Miss Drummond will be glad to answer questions by personal letters if a stamped self-addressed envelope is enclosed

Sensible precautions, after considering general health conditions, limit themselves to two things—massage and pure toilet cream. Both are well within the reach of all. Massage is possible to every woman who has fingers and a willingness to use them, and good reliable creams are plentiful on the market, so plentiful that it is a mistake to try to make them at home when time is so valuable.

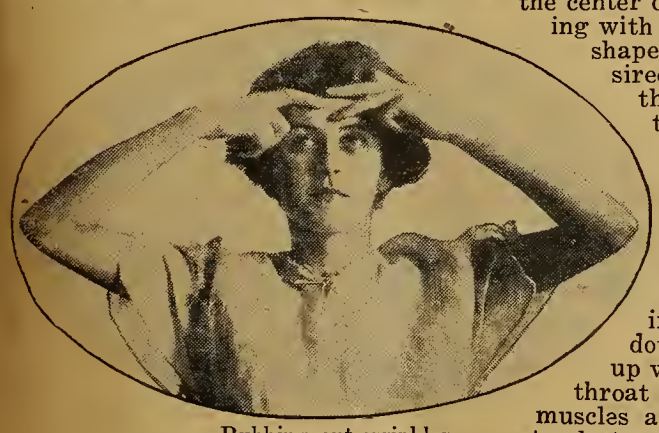
First of all, procure two jars of toilet cream—one for cleansing the face of all impurities, the other for use as a "tissue builder" by working it gently into the lines, the tiny creases, and over the places where sagging muscles show.

The best time to massage the face is just before retiring, when the day's work is over and its cares and worries can all be dropped. The woman who would be beautiful must drop her troubles when the end of the day comes, or she will rise in the morning looking haggard and worn. So drop every care when night comes, get into some loose garments, and proceed with the good work. First of all, wash the hands well, using soap and water, a good clear rinsing water, and thoroughly rub with a dry towel. See that the nails are not too long or rough, as a nail scratch is both painful and dangerous. Thoroughly cleanse the face of dust and dirt, according to directions previously given in this column, and then begin the general massage of the face with the forehead, where the deepest lines usually appear. Dip the fingers in cream, and when each finger tip is well covered pick out each line in turn and, spreading the skin apart with the first and second fingers of one hand, gently rub with the forefinger of the other hand in little circles, working first toward the right and then the left temple, and well up into the hair, following, however, the line always. Where it is deepest—usually the middle of the forehead—use more pressure than where it is less noticeable. But *never* use *hard* pressure, as this means injuring the delicate tissues underlying the skin. For the lines between the eyes use the same circular movement, rubbing upward. At the end of this movement take the muscles between the eyes in the thumb and forefinger of the right hand and massage—one finger against the other. For the crow's feet around the eyes the most delicate rubbing is required; indeed, it is not rubbing at all, but the gentlest patting with the finger tips all over the closed eyelid and under the eye. If there are deep lines at the outer end, spread apart the skin with the fingers and rub in a circle, ending the movement with a rubbing working toward the nose. Always remember to follow the line.

For the cheeks, place the hands under the chin, the fronts of the wrists together and the fingers spread so that they cover the face. Work upward and outward, using every finger tip, so that the tendency is to pull the strong muscles of the face up and prevent them from sagging. Massage right up to the edges of the hair. Then take the nose and with a circular movement in the deep corners and a light sweep at the upper part eliminate any chance of lines there. For the lips use almost as gentle a movement as for the eyes, except at the corners, where, if there are deep lines, use the circular movement, with a little upward pinching to finish.

Double chin is a serious detriment to many an otherwise beautiful face. Get rid of it, if this be your unfortunate possession, by massaging every day. Double your hand so that the second joints of the fingers rest directly under the fatty part, with the thumb and little finger acting as support. Then work from one side to the other, always using plenty of cream. Practice keeping your neck well up, so that your head is high and well balanced at all times. Little lines often appear in front of the ears, and are often overlooked. They are the first signs of advancing age. In rubbing, use the outward and upward movement. Placing the forefinger in the center of the upper lip and massaging with the thumb and second finger shape the lip into the much-desired Cupid's bow. This covers the massage of the face, but there are some other very important things that must be remembered—the strong muscles which control those of the face, and the muscles in the neck and head. These require harder pressure in massaging. For the neck begin low down on the chest and work up with a lighter pressure on the throat and under the chin. The muscles at the back of the neck can stand strong treatment, and it adds to the general relaxation if a hot towel is wrapped around the neck, changed often, and kept there throughout the process. For the muscles of the head place the hands on the cheek bones and, using the palms as levers, work all of the fingers into the scalp, "lifting up" the tight cords while massaging. This is good for both scalp and face, correcting as it does the tendency of the muscles to drop. Finish the treatment by patting the entire face with the finger tips and wiping off every trace of cream. Every bit should have vanished, but wiping it off with a piece of old muslin will remove the creamy feeling.

Eliminating the double chin



Rubbing out wrinkles

Somewhere in America

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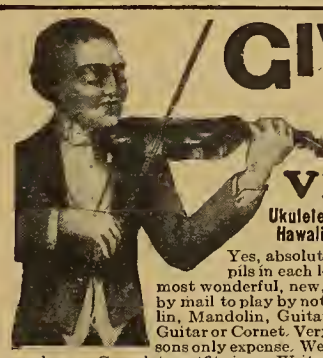

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The Doll Slackers

By Marjorie Grant

TILLIE and Tommy were the best dolls that ever lived, until a few months ago. They did exactly as their little mother Marian wanted them to do. They kept their clothes neat and tidy, and were as contented and happy as dollies should be.

That was before little mother Marian began to neglect her dolls. She would let them lie all day long in their little doll house, and she would sit hour after hour working with two long white needles and a ball of gray yarn.

So Tillie and Tommy made up their minds to run away. They dressed up in their very best winter clothes, and started to the door. Suddenly they heard Winnie, the little girl next door, say:

Tillie

"Why, Marian, what are you knitting? Leave that tiresome work and let's play with our dolls."

"I'm making a warm muffler for a soldier," said Marian. "Mother says if I don't do my part to help the soldiers that I will be a slacker."

"What is a slacker?" asked Winnie.

"It's a man who is afraid to be a soldier or a person who shirks his duty in wartime, Mother says," said Marian.

Tillie and Tommy looked at each other, and then they said, both together and almost in tears: "We are slackers."

Tommy

They ran back to the doll house as fast as their stiff little joints would let them. They knew that their duty was to be as good as gold and not cause their little mother Marian any trouble, so that she could knit many warm mufflers for the brave soldiers across the sea.

An hour later Marian came in and said: "I've finished my muffler, and you have been such good dollies that I'm going to take you for a long walk."

How glad they were that they had not run away!

New Puzzles

Man in the Landscape

As we stood with our professor on the —— of the hill, he pointed out interesting features in the landscape, and drew on his philosophy for our entertainment and instruction. Said he:

"In the distance we see the —— of the lake, from whence flow the waters down over the soft —— of Mother Earth, past the —— of the mountain and into the —— of the sea, that gather close around that graceful —— of land in the hazy distance."

As we retraced our steps past the —— of the cliff in the —— of the gale, the professor further remarked: "These unceasing activities of wind and water bring to our minds the admonishing thought that *tempus fugit*, that we must not indulge in ——— of time, lest the —— of scorn on the —— of fate find us not the —— of honor, and deficient in our contributions to the —— and —— of labor."

To complete the professor's lecture, all we are required to do is to place in each of those vacant spaces a word the definition of which is a part or attribute of the human body.

Answers to Puzzles

Puzzles Printed Last Issue

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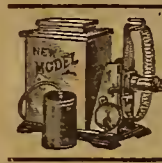

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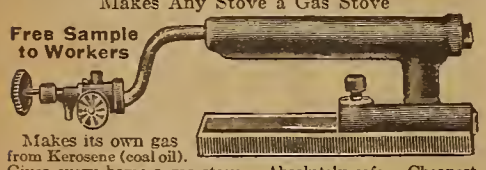

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The Bicycle Man, FARM AND FIRESIDE, Springfield, Ohio

Patterns of Special Interest

Suggestions for Make-Overs and a Two-in-One Dress

WHEN ordering patterns, read over your letter before you mail it, to see that your own address is correctly given, and that you have remembered to mention the size and the order number of the desired pattern. We try to fill your order the day it is received, but a little error may mean considerable delay.

THE Two-in-One-Dress — how practical that sounds, and how attractive it is when made like pattern No. 3405 shown on this page! To the right the dress is illustrated made perfectly plain, with just machine-stitching for finish. Above is an illustration to show the gown "dressed-up," with the snapped-on collar and cuffs. Just a second it takes to make the transformation, which is sure to appeal to any busy woman.

No. 3405—Reversible Front House Dress with or without Deep Collar and Cuffs. 34 to 44 bust. Material for 36 bust, five and one-half yards of thirty-six-inch, with one and one-half yards for collar and cuffs. Width of skirt, two and three-eighths yards. Pattern, twenty cents.

No. 3405

No. 3405 is a reversible front house dress. First you wear it buttoned over to the left, then when the front is worn or soiled you have an entirely fresh front by buttoning the dress over to the right.

"MAKE the most of what you have" is the woman's motto these war days in the matter of dress as well as in cookery. Making over is now just as fashionable as knitting, and the clever woman who can take a worn garment and make an attractive new one out of it is to be envied. The designs on this page are all well adapted for make-overs. Look them over and see if you do not get a suggestion for a pleasing addition to your wardrobe.

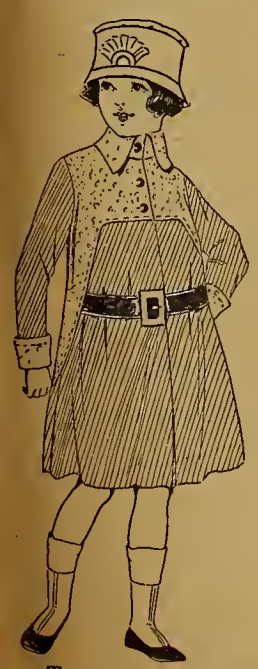
THE high-neck blouse returns to favor. How often we hear this these days. If you would be up-to-date, choose a pattern with a high collar for your new blouse. No. 3413 has the new "high" note and at the same time provides comfort.

No. 3413—Shirt Waist with Adaptable Pointed Collar. 34 to 42 bust. Pattern, fourteen cents.

No. 3413

No. 3413

Patterns may be ordered from the Pattern Department, FARM AND FIRESIDE, Springfield, Ohio.



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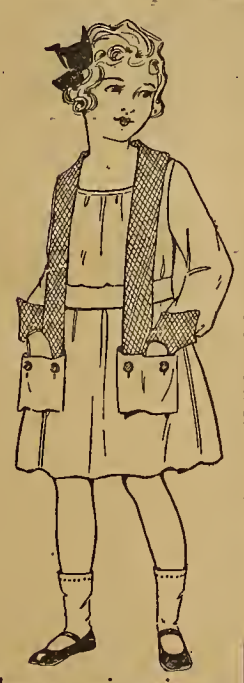
NO COAT or dress is so tight, so short, so entirely outgrown but that, in this sason of contrasting materials, there are ways and means of remodeling them. Secure pattern No. 3417 and prolong the life of your daughter's clothes.

No. 3417—Yoke and Cuffs for Girl's Coat and Strap and Cuffs for Dress. 6 to 12 years. Pattern, fourteen cents.



Two practical ideas for making the growing girl's clothes fit her growing size.

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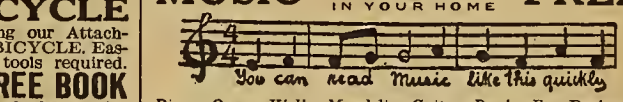

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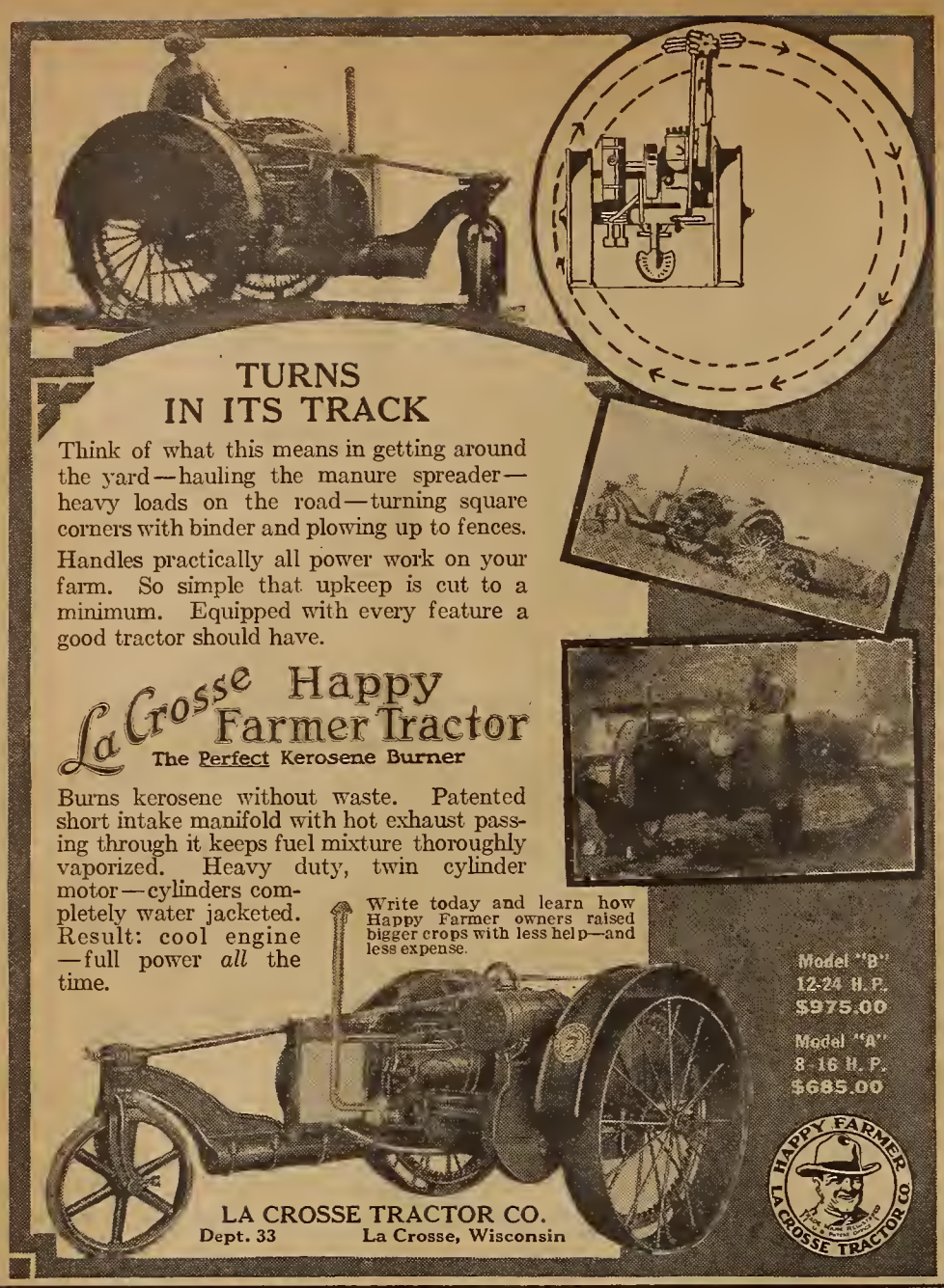

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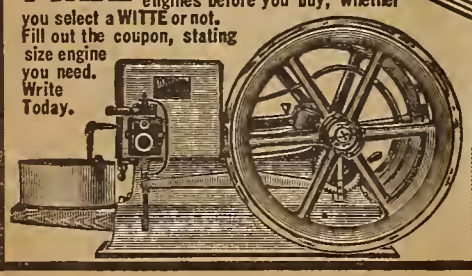

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Captured by the Germans

[CONTINUED FROM PAGE 5]

"This is no healthy spot for me," cried my chum. "Me for the supports."

Going back, we joined a party of four clustered around the only remaining traverse in our section.

We were safe from shell fire for a while, but eventually a big "crump" landed squarely on the traverse and we were all wrapped up once more with Mother Earth.

"I've had enough of this," cried one of the fellows. "There is no trench left. I'm going back." Three others joined him. That left just two of us.

We gathered together a few of the remaining sandbags and built a little wall of them, behind which we crouched. This did not last long. It was smashed, and I was hit in the leg.

"I guess we might as well get into a shell hole," said my chum.

We crawled along, found a nice big one, and promptly began to make it deeper. By now we had only one entrenching tool, a bayonet, and a rifle between us. While engaged in this a big one landed alongside of us. As we were both below the force of the concussion, we escaped being blown to pieces, but my hand was above the shell hole and I was hit in the palm. At last, after nine months' trench life, I had a wound."

"I've got my blighty," said I. "Tonight I shall be in England."

JUST then two hideous, dirty, unshaven faces appeared over the edge of the shell hole. One of them muttered to us in German, which we did not understand, but he signaled for us to come out. This we did. We were confronted by an officer who waved a revolver in our faces, and gave us instructions to proceed on into the German lines.

We crossed what had formerly been "No Man's Land," through the barbed wire and into the German trenches.

A German sentry took charge of us, and conducted us to the German Red Cross dressing station.

Here we had our first taste of German *Kultur*. Instead of having our wounds dressed at once, we had to wait for half an hour. Four other fellows joined us then, and we were transferred back to the main dressing station. After another wait the wounds were attended to.

While we had been waiting, a great number of German wounded were brought in, and it was owing to this that we had to wait so long before receiving any attention. I have seen prisoners brought in to the British Red Cross, and they received exactly the same treatment as our own boys do. They are taken in turn, according to their number.

Among the German wounded was one who was not very badly hit, so he was put in charge of us to conduct us back to the divisional headquarters.

"Are there no ambulances?" asked one of the boys.

"No ambulance for *Engländer Schwein*," he replied.

The day was extremely hot. The roads of Belgium are cobblestone, and are far from comfortable. We were all suffering from the loss of blood. Five of us were wounded in the leg, and walking was very difficult.

Upon arrival at the divisional headquarters, we were placed in the center of a field. We asked if we might not get under the hedge in the shade, but this was refused. We asked for water, and this request was also refused. When the Germans had finished counting us we were turned over to two Uhlans.

THAT journey will live long in my memory. We had to travel five miles, making a total of ten miles for the day. Being mounted, the Uhlans set the pace, and it was very fast. All were suffering intensely, and it was difficult to draw one foot after another. Perhaps one of the party would drop behind a few paces; up would ride the rear horseman. He was equipped with a twelve-foot lance, but I am pleased to say that he never used it on any of us. He had another method. He would ride his horse at full gallop at the one who was lagging, and force him into line.

As we passed through the different towns and villages the Belgian women and children would come to their doors and windows. As soon as they discovered that we were English, they would throw us packets of cigarettes, tobacco, and chocolate. But it was heart-breaking to accept these gifts, as we knew that they had to pay dear for so doing.

We had to witness several of these women being severely ill treated. Some were knocked down and kicked, others were grabbed by their hair and received several hard slaps and blows.

Plodding along footsore, weary, and suffering intense pain, we arrived at a fairly large town—Moorslede—about ten miles behind the German line. We passed through the streets to the hoots and jeers of the soldiers.

THE next morning I was taken before the doctor. He examined my hand.

"Will it be crippled for life?" I asked.

"No," he said. "In a few months you will be working for us in Germany."

That afternoon we were taken by train to Menin, changing cars here. On entering the other car we received a big surprise: it was filled with Canadians captured the same time we were. They were a sad-looking bunch.

"Hello, kid! Did they get you too?" I turned to find an old friend. One led to another, and soon I had found quite a number of the old regiment.

At Courtrai we were unloaded and taken to a Red Cross depot and given a mug of coffee and a sandwich. All being hungry, we asked for more, but this was refused.

At about twelve o'clock an ambulance arrived, and we were taken across the town to the hospital.

As I mentioned before, the doctor had said that my hand would soon be all right. In this hospital occurred the thing for which I can never forgive the Germans. Without an X-ray being taken the doctor proceeded to operate on my hand. I was held down by four husky Teutons, in lieu of an anesthetic, and the surgeon amputated the middle finger at the second joint and extracted five bones from the wrist. My right hand is now permanently helpless.

In all, I was in various German hospitals five months. One of those was set aside for one of the most terrible diseases. There were no nurses here, and we were forced to wait on the patients. A Frenchman who was with us received the germs in an open wound and died. The rations were poor, and we were continually hungry during the three months we were there. Altogether our stay there was a horrible experience, and we were not sorry when we were transferred to Celle, where was the first real German prison camp we had known.

This is the first of three articles Mr. Rossiter is writing for FARM AND FIRESIDE. *His second article, "In a German Prison Camp," will appear in an early number.*—THE EDITOR.

Does it Pay to be Tight with Your Family?

[CONTINUED FROM PAGE 7]

leaping flames shed a rosy glow over the room. In a big easy chair, half reclining, with her arms thrown over her head, sat—was it a girl or a woman?—my wife, aged forty-two, and two handsome, broad-shouldered men—our two sons, aged twenty-one and twenty-three. Their day's work was over and they were spending the evening at home. The atmosphere was charged with harmony.

I stood for a moment drinking it in, when Carl glanced up and saw me. Greetings were exchanged. They were solicitous for my comfort, eager for news of my journey. But a curtain closed down: something had gone from the atmosphere. A closeness I had never sought and didn't need when they were small, but for which I hungered to-night, could never be mine, for my own hand had thrust it aside and barred the door. Nothing I can do will ever make up to them for the things I didn't do when they would have responded so eagerly to my slightest advances. They are boys to be proud of, and honesty compels me to admit that I have had no part in it. I shut them out of my life by my harshness, my lack of sympathy, my lack of understanding, and, most of all, by my self-satisfied egotism; and to-night I am shut out of theirs—an outsider in my own family. What wouldn't I give just to be "Dad" to those boys, with all the chumminess the word implies! But "an eye for an eye, a tooth for a tooth"—it is the law.

Order Your Magazines

IF YOU failed to take advantage of the exceptional money-saving magazine offers in our December 15th issue you lost money, as prices have gone up on a few of our best clubs since then. They are going up still higher though, so don't wait a minute longer. We offer you below some exceedingly attractive bargains, but can not guarantee the prices beyond FEBRUARY 1ST. Get your shears and clip the coupon below and get your order in the mail to-day.

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Farm and Fireside (2 yrs.)	.50	
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Farm and Fireside (2 yrs.)	.50	
At Regular Rates	$1.75	and the coupon saves 10c more

To-day's Housewife (1 yr.)	$0.75	Our Price
People's Popular Monthly (1 yr.)	.50	$1.25
Farm and Fireside (2 yrs.)	.50	
At Regular Rates	$1.75	and the coupon saves 10c more

Woman's World (1 yr.)	$0.50	Our Price
To-day's Housewife (1 yr.)	.75	$1.25
Farm and Fireside (2 yrs.)	.50	
At Regular Rates	$1.75	and the coupon saves 10c more

People's Home Journal (1 yr.)	$0.75	Our Price
Woman's World (1 yr.)	.50	$1.25
Farm and Fireside (2 yrs.)	.50	
At Regular Rates	$1.75	and the coupon saves 10c more

People's Popular Monthly (1 yr.)	$0.50	Our Price
Woman's World (1 yr.)	.50	$1.10
Farm and Fireside (2 yrs.)	.50	
At Regular Rates	$1.50	and the coupon saves 10c more

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People's Popular Monthly (1 yr.)	.50	$1.10
Farm and Fireside (2 yrs.)	.50	
At Regular Rates	$1.50	and the coupon saves 10c more

Farmer's Wife (1 yr.)	$0.35	Our Price
Capper's Weekly (1 yr.)	.50	$1.00
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At Regular Rates	$1.35	and the coupon saves 10c more

American Poultry Advocate (1 yr.)	$0.50	Our Price
Farmer's Wife (1 yr.)	.35	$1.00
Farm and Fireside (2 yrs.)	.50	
At Regular Rates	$1.35	and the coupon saves 10c more

Youth's Companion (1 yr.)	$2.00	Our Price
Woman's World (1 yr.)	.50	$2.45
Farm and Fireside (2 yrs.)	.50	
At Regular Rates	$3.00	and the coupon saves 10c more

The Christian Herald (1 yr.)	$2.00	Our Price
People's Popular Monthly (1 yr.)	.50	$2.45
Farm and Fireside (2 yrs.)	.50	
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Every Week (1 yr.—52 issues)	$1.00	Our Price
Woman's Home Companion (1 yr.)	1.50	$2.60
Farm and Fireside (2 yrs.)	.50	
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Every Week (1 yr.—52 issues)	$1.00	Our Price
American Magazine (1 yr.)	2.00	$2.75
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If you send it with your order you can deduct 10c from price quoted

By using the coupon to the right and having your order reach us by February 1st, 1918, you may deduct 10c from the price quoted for any club on this page. It is positively necessary to send the coupon however.

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We still have a few of our beautiful 1918 Calendars on hand and as a special incentive to hurry your order will send one without cost and postpaid, as long as they last, to each person ordering one of these clubs. First come first served. These Calendars can not last long. Get your order mailed right away.

These Offers Expire on February 1st

Address orders to

Farm and Fireside Springfield, Ohio

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F.F. 132

Farm and Fireside, Springfield, Ohio

Find enclosed $..... which with this certificate pays for subscription *two* years to FARM AND FIRESIDE and one year each to magazines I name below. Also send me 1918 Calendar if there are any left when my order reaches you.

Name .....

P. O. .....

St. or R. D. .....State.....

1. ..... Name of magazine with Farm and Fireside

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4. ..... Name of magazine with Farm and Fireside

NOTE—This coupon will be accepted as 10c cash towards any magazine club mentioned on this page. Order must be accompanied by proper remittance and be received not later than *February 1, 1918.*

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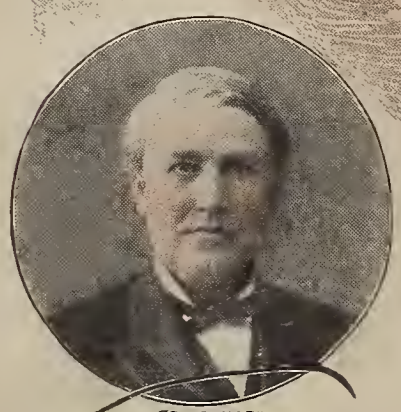

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FEBRUARY 1918

FARM AND FIRESIDE

The National Farm Magazine

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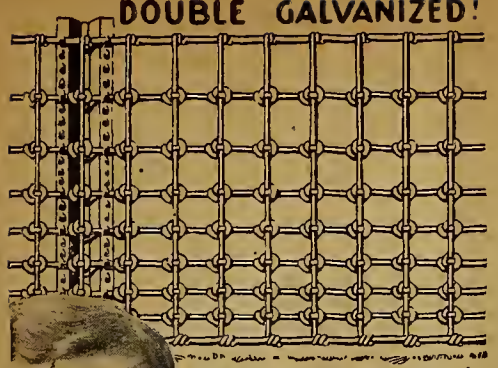

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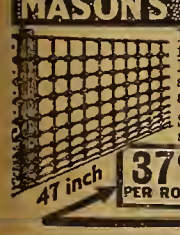

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FARM AND FIRESIDE

The National Farm Magazine

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FIFTY-FIVE persons have written for this issue. Some of their articles may help you to get on in the world.

Page 5—How I Made a Million Dollars Farming — *By Peter Hopley*
Mr. Hopley rose from poverty to riches. "I could do it again," he says, and proceeds to explain how he would go about it.

Page 6—Making the Hens Lay at Night — *By R. S. Moseley*
Hens lay more in the summer when the days are long. Electric lights increase egg production by lengthening the working day.

Page 7—Keeping the Home Fires Burning — *By Mrs. Harold L. Peat*
When the men go off to war the women must take their places. The problem of women in the war is solved with one word: Work!

Page 8—Selling War Horses — *By Ruth M. Boyle*
The Government will not buy "outlaw" horses for the army. Just what Uncle Sam requires is told in this description of a Montana horse market.

Page 9—The Booze Fighter — *By Tom Evanston*
Another crushing indictment of John Barleycorn as told by a man who was formerly his friend.

Page 10—A Living from Poultry — *By G. W. Church*
Skim milk from the dairy is coined into legal tender by feeding it to chickens. A profit of $1,494 is returned in nine months.

Page 11—When You Ask Your Banker for a Loan — *By F. H. Sisson*
The vice-president of a big trust company tells what the banker is thinking of when you ask for money.

Page 16—So You'll Escape Pneumonia — *By Dr. Charles H. Lerrigo*
Do you know that pneumonia is sometimes contagious? Dr. Lerrigo tells how to treat it, and also how to keep from catching it.

Page 17—The Car's Tool Equipment — *By B. H. Wike*
You need a pump and tire tools and a pair of pliers, but some of the equipment may be omitted for extra repair parts.

Page 20—Plowing Cleared Land — *By E. V. Laughlin*
There is a right way to go about such a patience-taking job. Proper equipment is a big help.

Page 22—Your Next Summer's Ice — *By John Coleman*
Ice is more than a luxury. It is a conserver of food. As such it demands your earnest consideration.

Page 28—At the Home of the White Hen — *By John Francis Case*
Many partnerships contain the words "& Son." But Mason & Daughter were just as successful in poultry-raising as any masculine firm.

Page 44—A Nation on Rations — *By Ruth M. Boyle*
You may be either a traitor or a patriot at the dinner table. If you save, you are a patriot; if you waste—you're not.

Page 45—Looking Your Best — *By Margaret Drummond*
Your hands may look just as you want them to, if you will spend a few minutes each day doing as Miss Drummond directs.

Page 46—A Liberty Loan Camp
Yes, there is something new under the sun in entertainments. This one is planned for church and school bazaars.

Our March Number

A few of the articles in the next issue: How I Was Treated in Five German Prison Camps, by Private Ivan S. Rossiter; Farming with Less Help, by J. R. Kuntz; The Confession of a Timber Buyer, by John Calderhead; When You Go to New York, by W. L. Nelson; Peaches and Profits, by W. J. Green; How Canada Met Her Farm Labor Shortage, by Justus Miller.

Published Monthly by The Crowell Publishing Company at Springfield, Ohio. George D. Buckley, *President;* Lee W. Maxwell, *First Vice President;* Thomas H. Beck, *Second Vice President;* Albert E. Winger, *Treasurer;* D. W. Henderson, *Advertising Manager;* L. V. Rodda, *Circulation Manager.* Editorial Offices, Springfield, Ohio; Executive Offices, 381 Fourth Avenue, New York City; Branch Office, 1316 Tribune Building, Chicago, Illinois. Entered at the Post Office at Springfield, Ohio, as Second-Class Mail Matter.

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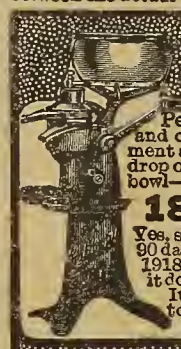

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There is a Galloway engine for any farm work, from the light 1¾ pumping engine—the light work 4 h. p., 6 h. p.—the heavy duty 9 h. p. and 12 h. p.—to the big 16 h. p. Mogul engine for the toughest job you have. And I make them all in my own factories.

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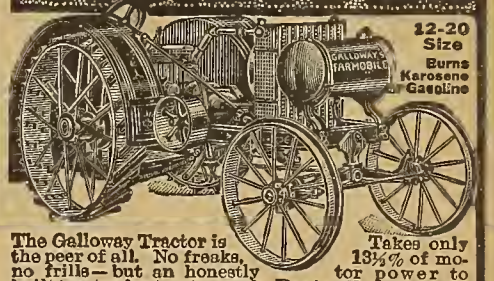

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DU PONT

VOLUME 42
NUMBER 2

FARM AND FIRESIDE

The National Farm Magazine

FEBRUARY
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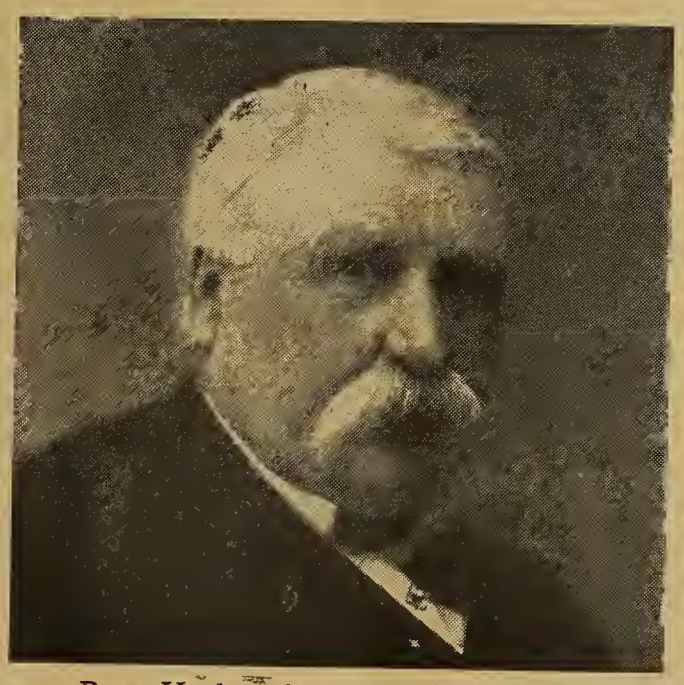
How I Made a Million Dollars Farming—*By Peter Hopley*

Where the Hopleys live



Peter Hopley, the writer of this article

One of the Hopley barns

I ALWAYS hesitate to tell the story of how I won my way from poverty to wealth: it sounds so much like boasting. And yet I believe that every successful man, no matter what his business, owes it to his fellow man to tell how he got ahead in the world. If telling my story will help others to get along, if it will encourage those who are tempted to give up because of disappointments and reverses, I believe it should be told.

As a matter of fact, I take no undue or unusual credit to myself because I have been able to accumulate a million dollars' worth of property by farming and live-stock raising. I have no doubt that there are many other men who could have done just as well, perhaps even better, if they had had sufficient faith in Mother Nature and had been willing to work and save as I have done.

I have some very positive ideas and convictions, and some men will differ from me. But my ideas and convictions, like my money, are my own—won by knock-down blows. I have always had an idea that any man with a good physique and plenty of determination could make a success at almost any job, if only he loved the job well enough. I suppose that this is the biggest factor in the success I have been able to make. I always loved the farm; I always had a special fondness for live stock.

I am seventy years old, and I have worked hard practically every day of my life, until last year. If I were twenty-five I could start all over again and, with the aid of my wife, do even better than I have done. I mean by this that there are greater opportunities to-day than ever before. The man who pays $200 an acre for good farm land now, buys it easier than I did when I paid $25.

Energy, ambition, and nerve will make a man succeed so that he never need envy any rich man, no matter what his fortune. I have no use whatever for a man who sits down and cusses a wealthy man. I did not start out in life with any preconceived intention of becoming a millionaire myself, although I may say, without undue boasting, that I have always enjoyed a good measure of foresight. A little example will illustrate what I mean:

I was born in England in 1848, and came to this country when I was eight years old. My father had secured a piece of land in Lee County, Iowa. The next year we moved to Cass County, and from then until I was almost twenty-one I worked for my father on his farm. It was hard work too—the very hardest possible. We were pioneers; there were more Indians than white men in the Middle West in those days. It was a hard life and a rough one, but it developed me, and I have never regretted the hardships I had to undergo: they made a man of me, and it takes a real man to fight life's battles to success.

My education consists of a winter's term in a pioneer country school. When I was twenty my father sold his farm and moved to Lewis, Iowa, a little, struggling pioneer town. He insisted that I go to school, so I went. I still talked with a broad English accent. I was tall, heavy-framed, raw-boned. Twenty years of age, with a man's deep voice, six feet tall and talking with a Cheshire accent, I went to school with little lads half my age. The first night after school the boys imitated my accent and made fun of me in every way imaginable. I stood it as long as I could, then I waded in and licked two or three of them. It wasn't any better the next day. But when noontime came I didn't lick any more kids; I simply made up my mind, then and there, that I would make a bigger business success than any of them made. That time came a good many years ago.

I walked home that second afternoon and lost no time seeking my father. "My time won't be up for some months yet," I said, for you see I was apprenticed to him until I was of age, after the custom, "but I want you to let me go."

"You must go to school," he replied.

"I can't," I said. "All I ask is my time and leave to go my own way."

He gave it to me, and that night I started west, bound for the gold fields. That day and a half was all the schooling I ever had, except the one winter in the country.

That was back in 1867. The times were hard, the country wild, the men rough. It was a great schooling for a boy of twenty, but a hard school too. Men talk to me to-day and call me brave for the things I did those days. Bravery, courage! It was nothing but the worst kind of foolhardiness. I wouldn't do those things over again if you would give me a patent to the entire United States. But then it was all in the day's work.

For fear anyone may think that I started out in life with an inheritance or did not make every cent I possess by my own unaided efforts, I will say that the first winter I was in the West I worked for my board. Even at that I was saving $9 a week. I worked out West for five years. They were five years of the very formative period of my life. The gold excitement was at its height. Men were driving daily over the richest soil the sun ever shone on, to seek a rocky soil where they hoped, often against hope, to strike it rich in gold.

They passed up gold mines in the fertile fields of Iowa, Missouri, Kansas, and Nebraska, to starve and die in the rocky fastnesses of Colorado and Nevada. But the rush was on and I joined in with the rest. I became a freighter. There is nothing that I haven't driven, from a Concord coach to a pack mule.

After that first winter at working for my board I earned $35 a month, at the hardest kind of hard work. I freighted from the western end of the Union Pacific, as it was being extended then, on to Denver, then to Kit Carson, and through all of southeastern Colorado and down into New Mexico. I hauled railroad ties for the Union Pacific extension from Denver to Kit Carson, 150 miles, and fights with the Indians were a matter of almost daily occurrence.

We lost many a man in those brushes with the reds, for we took desperate chances—chances I would not think of taking to-day, but we thought little of it then. [CONTINUED ON PAGE 18]

The power behind the throne: Mrs. Hopley and the five daughters

Making the Hens Lay at Night

By R. S. Moseley

HOW can a hen be induced to lay twelve months a year? Most hens do very well when the weather is warm and sunshiny. But the twelve weeks of winter will get even the best of hens into a condition of stagnation all too often. During most of this period sixteen hours of darkness out of each twenty-four must be spent in inaction and fasting on the roosts. And even during the few daylight midday hours the sun may be hid for days and even weeks at a time.

What then is the remedy which will change this all but eggless period into one of productiveness and profit? Thousands of skilled poultry keepers have considered this selfsame question during the last two months with even more anxiety than heretofore on account of the increased expenses.

The best of breeding for eggs, full and perfect development of the layers, and every comfort in housing and requisite of feed have not satisfactorily solved the problem. The situation is critical and acute under present food-scarcity conditions.

In the face of such annual wide-spread shortage of fresh eggs during the period of shortened daylight, it is a satisfaction to me to bring to FARM AND FIRESIDE readers a tried and proved remedy for lengthening the daily active working period of our layers just as we extend our winter days at both ends.

Artificial lighting of poultry houses is not a brand-new idea. Eighteen years ago Professor James E. Rice, chief of poultry investigations at Cornell College of Agriculture, found a poultry keeper at Cambridge, New York, who was making use of a lantern to keep his hens active during the short winter days. Other poultrymen have tried out the same plan in a more or less thorough manner since that time, and all have felt sure that the artificial lighting helped to increase egg production when persevered in. However, nothing had been systematically done to commercialize the practice until about three years ago, and then only in a few widely separated sections of this country was artificial lighting made a regular part of the poultry program.

Erie County, New York, to the best of my knowledge, has done more along this line than any other county in the nation. In this noted poultry center more than one hundred of the commercial poultrymen are now using artificial lighting and getting excellent results.

Having been given the supervision of the Cornell poultry project in Erie County, I have been enabled to get a thoroughly complete understanding of just how the artificial lighting of poultry houses is working out in this locality. It is the purpose of this poultry-project investigation to keep in constant touch with poultrymen of this county, and to encourage better poultry-raising by co-operating the year around with a certain number of plants which have become members of the project by paying annual fees. Each of the fifty members that are visited periodically throughout the year are required to keep accurate records of their poultry operations, and these complete monthly records are sent in to the supervisor, by whom they are checked and sent to the poultry department of the state college. It will be understood by this that my duties as supervisor have furnished me an opportunity to make an exhaustive study of this phase of the poultry industry.

In 1915 there were only two poultry plants in Erie County using lights, and these were connected with the project. One of these plants had 3,500 hens. I made a careful study of the effect of light on these two plants throughout the year. Check pens were used during the early part of the winter, but the hens in the pens that were artificially lighted laid so many more eggs that the owners were induced to light all of the pens except where the breeders were kept. Twenty-four hundred pullets were under light, and they reached their highest winter production on December 10th with 1,610 eggs, or 67 per cent, for the one day. At the price of eggs at that time the value of the eggs produced for the day was nearly $80. In spite of the heavy and unusual early production of this flock, the highest average production for a month was made in April.

In 1916 a comparison between flocks on the project under lights and those unlighted showed a 20 per cent to 40 per cent greater production in favor of the lights. Many forms of lights were used on the plants—individual electric plants, natural-gas lights, and kerosene lights, all giving good results.

It was difficult to work out an experiment for any length of time, for, as heretofore mentioned, as soon as a member found he was losing money on the check pens, lights were turned on the whole number.

A test was made on one flock beginning January 10, 1917. This month was exceptionally stormy and cold, which had its effect in lowering or keeping production from increasing under natural or unlighted conditions. In this house, 16x100 feet, where the test was made, 420 pullets of good breeding were kept. The house had six convertible pens, and all pullets were running together previous to selection. One sixth of the flock, or 70 pullets, were selected by the superintendent, and placed in a pen which contained one sixth of the floor space of the house, and lights were turned on.

Great care was taken when selecting the pullets not to favor the ones under the lights. The remainder of the flock, 350 pullets, ran together and received the same feeding and housing as those under lights. Two natural-gas lights were placed in the center of pen, and were lighted at 6 A. M. until daylight, and again at dusk and kept going until 8 P. M., then dimmed, and at 8:15 turned out. Pullets were fed one quart of scratch grain to each 100 birds at 6 A. M., and five quarts at 6 P. M. Mash hoppers containing a well-balanced ration were kept open before them. A straw litter eight inches deep was used to provide exercise.

The 70 pullets under lights began to increase their egg production, and on January 29th laid five more eggs than the 350 pullets that day, and they also laid more eggs on February 1st.

The production from the unlighted pens for the 31 days was:

350 pullets laid 1,917 eggs.	Value	$83.04
70 pullets laid 1,108 eggs.	Value	47.01

But it requires nearly two weeks for the dormant ova to develop into an egg, so the comparison is most fairly shown during the last half of the period as indicated by the following figures:

350 pullets laid in 17 days 1,084 eggs.	Value, $46.95.	Cost of feed, $56.00.
70 pullets laid in 17 days 790 eggs.	Value, $34.11.	Cost of feed, $11.04.
Loss on 350		$9.05
Profit on 70		23.07

The appearance of the pullets under lights changed remarkably. The plumage was glossy and the comb was as red as it is possible for it to be at any time of year on a pullet under heavy laying. Pullets that showed backward development when placed in the lighted pen started to develop, and in a short time resembled their more mature sisters. I find this transformation of development in every plant under lights that I have observed.

Some observations I have made and confirmed in flocks kept under lights in the county can be summarized as follows:

Hens when kept active twelve to fourteen hours daily by artificial lights require abundant feed and litter to induce exercise.

Any bright light strongly reflected to the floor will give good results. But each 400 square feet of floor should have about 60 candlepower. The cost of lighting a house to accommodate 500 hens by electric lights runs from $3 to $4 a month. With modern high-illuminating kerosene and gasoline lanterns the cost is considerably less.

Under lights, early maturing yearling and two-year-old hens lay well all winter, but breeding stock should not be kept under lights or they will lay too heavily and lower their value as breeders.

The feed rations can be made less rich in animal protein and a more bulky feed used when hens are kept under lights.

There is danger of overdoing the lighting and exhausting the stock if care is not taken; but where good judgment is used a proper distribution of egg production is made possible throughout the year without increasing the mortality of the layers.

Turning night into day with artificial light causes these hens to feed and lay four hours more a day

Hen Patriotism

By MRS. N. B. ASHBY

I DON'T believe a woman can do a more patriotic deed than to do the thing she knows how to do well. Most women are "good hands" with chickens, yet this year the high price of feed threatens to decrease the size of many flocks.

To grow more chickens this year is a patriotic duty. This does not mean that we need to keep more hens, but to plan to keep better ones and take better care of the flock—to get better fertility, greater hatching per cent—more vigorous chicks. Our allies and our own soldiers need meat. Beef, mutton, and pork can be shipped to them if we provide poultry in abundance. Poultry will take the place of meat for home consumption. Every fowl kept this year should pay for its keep. Poultry can be grown at a profit if we cut out leaks and losses through added personal attention.

We need to do more than rear chickens and gather eggs—we need to advertise the value of chickens and eggs as food, and to make public the cost of producing them. Heretofore whenever a good egg yield has been secured, the producer has too often rushed into print to boast of it. Truthful people have spoken of poultry profits in too optimistic tones. So many poultry keepers have turned the silver lining toward the public until it has come to believe that the entire chicken business is tinged with silver.

We women poultry growers can promote a disposition to pay fair prices for eggs by letting the public know that eggs are by no means all profit.

Farm women can afford also to interest themselves more in the handling of the eggs and stock after they leave the farm. The loss in transit is criminally wasteful and careless. The women who produce as well as the women who consume pay this bill; it is not paid by the commission men.

This year is the time of all times for organizing local poultry associations and for holding poultry shows in connection with the farmers' institutes. If the War Poultry Association lives up to its opportunities, it will also take up the matter of purchasing foodstuffs and co-operating in hatching chicks with large incubators; it will look after the marketing.

The price of eggs has usually been too low in comparison with the cost of care and feed. If the poultry keeper cannot get a profit over the cost of production, he will naturally reason that his time and money can be put to better advantage in other lines. He will assume that he is more patriotic to conserve wheat than to feed it where it will not return cost price.

Keeping the Home Fires Burning

By Mrs. Harold R. Peat

THE author of this article is now the wife of a Canadian soldier. When the war broke out she was a special writer for a London newspaper and frequently visited the hospitals where wounded British soldiers were convalescing. During one of these visits she met Private Harold R. Peat, breveted a lieutenant for gallant service at Ypres, whom she married. No one is better fitted to tell the part the women abroad are taking in the war than Mrs. Peat.—THE EDITOR.

WE WOMEN over on the other side of the Atlantic have at last realized what war means—what war is. War in itself is of a dreadfulness which is indescribable. We know that.

But as yet we have not realized what must be the outcome of war, beyond two things. We know, as we have always known, that ours, the Allies', is the ultimate victory. We know now, as we have not always known, that from this war is coming to the world of women and to the world at large a great deal of good.

For the first time in our lives the vast majority of us are learning the meaning of unselfishness. We are working for others; we are giving up our time, our energy, our money, and our thought for the sake of men whom without war we should never have heard of, never have cared about, and whose living or dying was a matter of no moment to us.

For the first time in our lives a whole host of us are learning the true meaning of service. Ah, folks, there is a true keynote of the fight! There is the whole lesson of war! Service to the country, service to our flag, service to our brother man and our sister woman!

Do you know that away over in the little old country we women have learned the sisterhood of sorrow? Do you know that to-day we women over there are learning the brotherhood of work?

How many of us there were who in 1914 rushed hither and thither, saying continually, "I want to do something!"

What do you want to do? Ah, what? What can you do? What will you do?

Those are the vital questions of wartime. Those are the problems we have fought and wrestled with for three years, and I hope—no, I am sure, that we have conquered.

What can I do? Ask yourself. Nothing? Then train in some branch of work. Go and learn. If you neglect you are a slacker. You could do something if you would.

What do you want to do? There, follow your education, your accomplishment, your ability, your inclination as far as you may. You can't be a round peg in a square hole. You must fit in war as you have never fitted before.

What will you do? Here comes the rub, and here comes what to many of us was a trial three years ago. If we did this, if we did that, or if we did the other, would we lose social position—would we lose caste?

Thank God, we have learned from war that all service is noble. We have learned that the private in his muddy tunic is as important to the ultimate outcome as is the colonel, the major, the general. We have learned from war that if we are financially independent and yet must accept payment for our work because of industrial conditions, such payment is not derogatory to us. We need not take it for our own use. There are plenty of sources into which we can deflect it from our own pockets.

National service means doing one's ordinary duties better than before, and it means doing more, much more, besides. That is why war is so hard on women. That is why we want all of courage, of spirit, of endurance, and of prayer which is for us to grasp. For women it is a war of waiting and of working, but no longer a war of weeping.

It was Milton who wrote, "He also serves who only stands and waits." Not an idle waiting, folks, an energetic, life-stirring, soul-broadening time of waiting. There is no excuse for ignorance in war. There are things to learn, there are things to do. Go and do, go and learn whilst in the waiting.

It is for our women to make ready the new world; it is for our women to create the new atmosphere which must pervade the nations when weapons are laid down. We have right now to learn to work as we have never worked before. Go to committee meetings, yes; but remember it is only results which count in war. In England, long ago, we cut out committees and substituted work.

There is not a woman who wishes to shirk. There is not a woman deliberately a slacker. Rather do we go to the other extreme. We rush in frequently to do things which are unfitted to our temperaments and to our physical condition. The soldier who fights is kept in the last degree of physical fitness. We must remember that the nation is looking to us for the heavy end of its work; we must keep in perfect physical condition or we fail our country in its need. Along with work we must practice reason. The old exploded notion that women have neither reason nor logic has gone by the board this many a day. We have both if we wish to exercise them. We have got to exercise them now, in this period of the world's new-found need of us.

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The women of Britain help in the fields

We learned in England to fit the woman to the job, not entirely the job to the woman. We learned also in England to fit our tools and our machinery, where it was possible, to the woman. It takes big organization; it takes mighty hard thinking; but there is a need for everyone, there is a niche for everyone, there is vital work for everyone. If we only scrub down the back stairs of a hospital every day, it is necessary war work, vital to the nation, vital to victory.

We learned in England that if women were to do men's work, and do it well, they must be given a chance. Hitherto employers blindly stated that women could not do men's work. The reason? Simple. Because they had never tried seriously; because they had never trained seriously; because there had never been urgent necessity. Employers trained women—"unskilled laborers"—in unskilled labor. At last they gave women a fighting chance.

It certainly is not for all of us to get into picturesque uniforms and be photographed by the press. You may think yourself as but an atom in the big scheme of organization, but think of the vast importance of an atom. Steel is composed of atoms. What if there were a flaw in one atom of the steel in a tank?

Men are going into the ranks—God bless them!—we must take their places in the routine of the world. They have ruled and made many a muddle in days gone by,—dear, blundering souls!—now is our time, women's time, to right the wrongs, untangle the twists, and undo the knots. Not selfishly. No. Don't forget the men still own a share in the world. Don't forget they are fighting for us—for womanhood. Don't forget they are offering life itself for us. Don't forget they are fighting to win an eternal peace for our sakes. Get into line with the men! Be pals and partners! Get ready to better ourselves, so that we shall be better companions in a better world for the better men who are coming through the ordeal of fire! Better men? Yes, better men.

Day after day I have repeated to me obnoxious tales of the demoralization and degeneration of our men who are and have been fighting. It is a lie. It is an insult to every mother, wife, and daughter that such things should be said. It is enemy propaganda insinuated into our midst in the usual clever, cunning fashion. The enemy wants such statements repeated and whispered over, and gossiped about. Every time such disgusting stories are handed from mouth to mouth over the tea table or the lunch or the dinner, the enemy chuckles at the success of his work. Every time a woman repeats any such statement *which she has not proved conclusively*, she is helping the enemy as though she were in the pay of the Kaiser. War may make, and does make, men superficially rough, but war has not made *our* men bad.

After all, this time of war is but a training period of work. When the war is ended the world has to be reorganized. What share do you think women will have in the reorganization of the world?

There is no doubt, no smallest doubt, but that women must and will take an equal share. We women have proved for all time that we are fit to become joint citizens of the world. The giving or the refusing of the ballot is a mere nothing. We as women do not do our war work and our world work for a tangible reward. We do not ask payment in enfranchisement. We work, as men fight, for our common ideal of liberty and our ideal of right—the ideal of our flag and the ideal of our nation. But because of the very efficiency of women's war work, as in Britain, every civilized nation will grant the franchise to the vital half of its population.

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Queen Mary visits the nursery where the children of women munition workers are cared for

No; we of the old country, we of the Dominions overseas, have not looked for reward, material reward, for our work. We have learned that should autocracy dominate democracy, all our ideals, all our principles, all our standards which have been evolved since the beginning of time, must be set at naught, must be reckoned as futile and false.

We cannot have this. We dare not have this. We cannot conform to the German creed. We will not conform to the Hun creed of ruthlessness, of frightfulness, of horror, and of vandalism.

Back in 1915 men realized that the task was too big for them alone. They knew that if they went into the fighting front someone must stay back and "keep the home fires burning." There only remained the women.

There was Red Cross work. Yes; that was essentially feminine as an occupation. Men would not have entered into it, in bulk anyhow. There was ever-increasing need of Red Cross workers, and there is an ever-increasing need of them to-day, after three years of war. So women have flocked to the standard of the Red Cross, making indispensable bandages and compresses. [CONTINUED ON PAGE 21]

Selling War Horses

What the Government Wants in Saddle and Pack Animals

By RUTH M. BOYLE

"We're off!"

RIGHT shoulder, swinging H. Wonder who owns that? It's North Dakota, ain't it?"

"Yep; fellow from Belfield."

A tanned, wiry chap with gray hair, dressed in khaki trousers, gray cotton shirt, and cowboy hat, drawled the question. He was sitting on top of one of the high posts of the corral under the branches of the great cottonwood. I learned later that he was president of a Miles City, Montana, bank and owner of a big horse ranch.

"Motorcycle Mike," in spurs, chaps, beaver hat, and purple handkerchief tie, answered the question. A movie manager's heart would leap at the sight of him, so thoroughly typical of the old Wild West he is, and his riding wouldn't need any doctoring of the films to make it sufficiently thrilling for the most jaded Eastern audience.

It was one of those bright, dusty, blue-sky days typical of Montana autumns. Horse buyers and sellers, riders, and a few curious citizens in, on, and around the corrals were watching the government inspection of horses at the sales yards of the Miles City Horse Sale Company, the largest market for range horses in the world.

Major Austin, from Fort Keogh, Montana, and a veterinary, Lieutenant O'Hara, were examining each horse as it was brought in. Every few minutes the clatter of hoofs and a cloud of dust heralded a new bunch which were run into the corrals and then brought up for inspection one by one.

Branded as Fast as Bought

THE decisions were made rapidly. The officer and the veterinary glanced at each animal's mouth, appraised his weight and height, and looked for defects—splints, spavin, ring bone, jack, bad eyes.

"He's a good horse." A seller was praising his goods. "He'll last a long time."

"Yes," said the officer quickly, "he'll last a long time because no one will ever use him. Take him out."

The good-natured laugh that followed sobered to businesslike attention in a moment when the next horse was brought in.

"All right. Back him up." Then: "Trot him a little."

A fine-looking bay had passed the preliminary inspection. A crack of the whip and he was trotted down the corral and back to the officers.

"Artillery horse," and he was led into an adjoining corral to be run a short distance as a wind test. Afterward he was tested for glanders, and the red government tag telling his age, color, sex, weight, height, and so on, was attached to his ear. That record of his history and purchase will follow him no matter how far he is sent or how long he remains in the service. Finally he was driven out into the larger corrals, and thence to a chute and into the branding pen. There he was marked U S, with a big A underneath to signify that he was an artillery horse. Thus he became the property of the United States Government.

About the same procedure marks the selection of horses and mules for other service, except that cavalry horses are given a saddle test and are branded with a C, and the mules are branded with L, W, or P, according as they are destined for lead, wheel, or pack service.

"Horses for the artillery and cavalry are now being bought by the army," explained Billy Richardson, state inspector for that district, and who, with Al Wright, a horse buyer and shipper, was acting as my guide. "No big siege horses are being purchased now by Uncle Sam, although the English Government is buying them almost exclusively. Three types of mules are being purchased by all the governments—pack, lead, and wheel mules. A good, well-shaped, serviceable animal, with plenty of action, is what the Government wants."

Officer Rejects the Outlaws

IN GENERAL, Major Austin bought horses 15 hands high and weighing 1,000 pounds for the cavalry, and 15½ to 16 hands, weighing 1,300 pounds, for the artillery. Mules range from 14½ to 16 hands, and from 900 to 1,200 pounds in weight, according as they are classed for various kinds of work. All of them must be between five and ten years old.

"Young stuff"—that is, under five years old—is bought entirely unbroken, and is sent to Fort Keogh, a remount station two miles from Miles City, where they are broken and trained for army purposes. They must become accustomed to the picket line, to mounting, and to maneuvers in military fashion. The horses bought at the inspections, however, are shipped at once to the various camps where they are needed, and there their training is finished.

"Reject!" called the officer suddenly. "We don't want anything that's too sniffy for even you fellows to handle."

I understood that remark better a few moments later when a friendly voice called from the corral where horses were tested for wind and for being saddle-broke:

"Come on over here, lady, and you'll *see* something. They've got a bunch of snaky ones they're going to ride out for cavalry."

Several of the best broncho twisters in the Northwest ride the horses which have passed the military inspectors. Sometimes the animals are scarcely halter-broke, and many of them, although they have been used as work-horses, have never had a saddle on them.

Denver Sherman, famous for his fancy riding and in demand at round-ups and range festivals because he can ride the wildest steers backwards; Floyd Coleman, long and slim, whose picture on a "snaky one" one can find in any collection of wild west photographs; "Motorcycle Mike" aforementioned, and Stewart Windeape, who can ride with the best of them, are among the gentlemen whom the Miles City Horse Sale Company calls upon to show Uncle Sam's buyers that the cavalry candidates are "broke to ride."

Two or three horses were led in, saddled without unusual difficulty, and loped off readily enough under the urge of the rider's spur. With the "sniffier" ones a bystander covered the horse's left eye while the rider saddled and tightened the cinch. Then he mounted, and in a flash was lost in a cloud of dust, the horse bucking violently down the course.

"Here's a sweet one," exclaimed an onlooker. "Up on his hind legs, way up in the air; don't want to associate with us common folks nohow."

This one is easy

I turned. There was a violent commotion behind an all-enveloping veil of dust at the end of the corral. Then suddenly emerging from the dust came a vicious black horse. Hanging to one of the animal's ears by his teeth and dragging at the other ear with his left arm was Denver Sherman. A clatter and a whirl, everyone scattering, and the brute was bolting across the corral with the man still hanging to his ear. Crack! The horse banged his conqueror into the fence.

"Le' go the rope!" yelled Denver, still hanging on.

But the army officer stopped the pretty performance.

"Reject!" he ordered.

"Too bad," commented my guide. "Denver'd a got him saddled if he'd waited a minute."

But Denver, mopping the dust and sweat from his face, sauntered over to the shade of the tree.

"Le' me get in the shade so I won't get all tanned up and dark-complected," he pleaded comically.

Army Buyers Know Horses

EVERY third week a great public sale is held at the sales yards, and as many as 5,000 horses at a time pass through the yards on these occasions.

"The good ones go at the rate of one a minute or faster," the manager told me.

The horses inspected by the United States officers average about 1,200 a week. It is hard work, but it is well and thoroughly done.

The year 1914 was the high year for horse sales in Miles City as elsewhere in the country, for then all the allied governments were buying everything they could get hold of. During that year 30,893 horses and mules went out of the sales yards. Since then the buying has been steadier and more restrained, and the funny stories told of the buyers who knew horses but spoke no English, or who knew a little English but had no knowledge of horses, are decreasing. "Schoolboys" the veterans call the young chaps who are a little nervous of their ability to judge an animal.

The Western horse has been a favorite for war purposes because in its blood is the strain of the wild horse of the plains, tough and hardy, and noted for endurance, speed, and spirit.

Guy Crandall and Edward Love are respectively manager and president of the sale company. Both are originally from the Middle West, used to handling horses from their "kid" days, and both had experience in St. Louis when the greatest horse exchange was located there. Their horse knowledge and their fine business methods soon brought the Miles City market to its present prominence.

Every day remarkable exhibitions of fine and daring horsemanship, surpassing what thousands go to witness in wild-west shows, go unnoticed. The buying of horses is only a small part of the great machinery of the army, but staged in an outpost of the fading frontier like Miles City it has a dramatic interest all the more marked because of the matter-of-fact attitude of those who play the leading rôles.

Uncle Sam doesn't care for this kind

The Booze Fighter

How I Acquired, Fought, and Conquered the Whisky Habit

By TOM EVANSTON

ALTHOUGH I was born and raised in that part of Kentucky where there was plenty of bourbon whisky, I never even knew the taste of the stuff until I was thirty years old. My folks were deeply religious people, and it was against their creed to touch alcoholic drink. It was never allowed inside our home, and my parents would scarcely enter a house where it was allowed. Morning, noon, and night they preached against it; and let me tell you they had some mighty fine arguments to support their preaching. All that, however, failed to save me.

I got married in my twenty-eighth year, and my wife and I bought a farm of our own—our families for three generations had been farmers—and it was a year after our first baby came that I took my first drink.

I'd gone to the Kentucky Derby, and it was there I met Judson Parker, an old boyhood friend of mine, who'd left the farm and gone to Louisville. Jud had changed considerable since I saw him last, and I wasn't so sure the change was for the better, although I can't say it didn't appeal to me then.

You see, I was only a green country boy, while Jud—well, Jud wore expensive clothes, a Panama hat, and a diamond horseshoe stickpin, had a field-glass strapped over his shoulder, and seemed well supplied with ready cash. He never said, exactly, what business he was in; but the first thing he said, after clapping me on the back and shaking my hand, was:

"Well, old scout, let's have a little drink!"

I told him I wasn't drinking anything. He laughed, and slapped my back again, as if I'd said something funny.

"Still on the sprinkling cart, eh?" he chuckled. "Well, I'll have to forgive you, I guess, for old time's sake. But have a little seltzer, anyway. Even your dad wouldn't object to that."

"It doesn't matter if you spent only ten dollars a year on whisky—or even if it was given to you free. The fact remains that your drinking costs us hundreds of dollars a year"

So we went to the race-track bar, and he ordered a mint julep and I ordered buttermilk; and he introduced me to three or four men who were standing at the bar, and who greeted him familiarly. He seemed to know everybody, and somehow I couldn't help but feel a little envious of him.

One of the men to whom he introduced me represented a distillery down my way, and when Jud told him I never drank anything stronger than buttermilk for fear of getting a headache he eyed me curiously and said:

"That's because you've never tried our bourbon. I'll see that you get a sample right away." And he wrote my name and address on a card.

Then he called for another round of drinks, and they all ordered his brand of whisky. When my turn came I told the bartender I'd take the same—meaning, of course, another buttermilk. But the bartender apparently misunderstood, for he placed a whisky glass before me and asked me what I'd have on the side.

I'm not much of a hand at analyzing my actions, so I can't tell exactly what caused me to fill that glass from the decanter the others passed to me. It may have been that I was afraid of offending the whisky drummer, or maybe I was just a little curious to know what the stuff really tasted like. The fact remains, at any rate, that I *did* fill it, almost to the brim, and swallowed it all in a single gulp.

I won't attempt to describe what followed. When a man lives thirty years without touching a drop of liquor and then suddenly drinks a glass of it, with no warning to his stomach, the result is apt to be disastrous.

It was for me, anyway. But I took several more drinks, with the result that I couldn't have told you my name, my age, my color, nor anything else about me; in short, I was blind drunk.

I didn't go home that night, and when I came to next day at my hotel I was absolutely flat broke. I couldn't locate Jud anywhere, and I had to pawn my watch to buy a railroad ticket.

You may well believe that I was feeling pretty sick and miserable and self-disgusted when I got home late that afternoon; in short, I felt like a flea-bitten, egg-sucking cur. My general discomfort wasn't helped any when I discovered my wife had left, taking the kid with her.

My first thought was that she had learned what had happened and had quit me for good, but my foreman soon reassured me by saying that she'd gone to visit her folks for a few days. Then he added, watching me in a strange manner:

"An express package came for you this morning. I took it up-stairs to your room."

It was the "sample" of whisky the drummer had promised—a quart bottle of their leading brand of bourbon. You'd think, after what had happened, I'd have taken an ax to that bottle and smashed it into a million pieces; but I did nothing of the sort. Instead, I uncorked it and took a whopping big drink. I didn't even wait to get a glass.

It seemed to be just what I needed, for I felt better right away. Then I hid the bottle on the top shelf of an old clothes closet, and when my wife got home everything was the same as usual—outwardly, at any rate.

The quart bottle lasted me about ten days, and when it was gone I ordered two more. I called for them at the express office, and sneaked them home and hid them so my wife wouldn't know.

The drummer's sample was a pretty profitable one—for his whisky firm. During the next few years I spent more money with that firm than I like to think about. I was never what you could call downright drunk. You see, I was a solitary drinker, and the drinker who goes it alone is not so apt to get intoxicated as the convivial sort. But I reckon there wasn't a day in all the years I soaked up booze that I wasn't more or less under its influence.

Whenever I felt a little below par I'd take a drink. When I felt bully I'd take a drink. When I felt just medium I'd take a drink. And pretty soon I got so I'd take a drink the first thing in the morning, another one at noon when I came in from the fields for dinner, and another at night before going to bed. And the more I took the more I wanted. I never was quite satisfied.

And all the time I kept telling myself I could quit whenever I wanted to. Looking back now, I can realize that this was the costliest feeling I ever had. It lured me on to drink deeper and deeper.

"It'll never get me," I'd tell myself—and it had me then.

I also told myself over and over that everything was going ahead pretty much the same as always: the farm was paying fairly well, my family was tolerably happy, and we were more than holding our own. That's what I told myself, but it wasn't true. We weren't holding our own at all. Our neighbors were passing us. They were sending their wives on cross-country trips while mine stayed at home and drudged in the kitchen. They were buying high-powered touring cars while we contrived to get along with our old battered-up second-hand car. And so on. Our neighbors were beating us all around.

I couldn't help knowing these things, of course. The trouble was I didn't care. And that, in my opinion, is the most treacherous result of whisky drinking: *it makes you satisfied with failure.*

Things came to a climax when my wife discovered the spot where I'd hid my supply of wet goods. Of course she'd known all along I was drinking, even if she hadn't said very much, but this brought matters to a head. I knew I was in for it when she came into the sitting-room one night after our daughter had gone up-stairs to bed, and said to me very quietly:

"Tom, we're going to have a talk about this—horrible habit of yours. It's got to stop."

Well, of course I tried to bluff it out.

"What habit?" I asked, as if surprised. "What are you talking about?"

But I saw it wasn't any use. She had the goods on me. She'd carried my jug of whisky outdoors — yes, I was buying it by the jug at that time—and smashed it up with a hatchet.

When she told me that I got pretty hot around the collar. I stormed angrily up and down the room, talking in a violent tone. I told her things had reached a pretty pass when a man couldn't have any privacy in his own home, and I tried to tell her that my whisky bill for an entire year wasn't seventy-five dollars, all told, and that she spent more than that on her own personal luxuries, clothes, and so on—I say I tried to tell her that, but she didn't let me get very far.

Somewhat angry herself, she interrupted me by saying that in the last three years she hadn't bought a single new dress, and the only money she'd spent on herself was a little she'd made by raising chickens.

"And besides," she hurried on, without giving me a chance to answer back, "it doesn't matter if you spent only *ten* dollars a year on whisky—or even if it was given to you *free*. The fact remains that your drinking costs us hundreds of dollars a year.

"Just to show you I'm right," she said, "I'll give you some figures to look at," and she ran to my desk and got out the bank statements for the last two years or so, as well as the statements covering the year before I began to drink, and proved her point beyond a doubt.

I slipped the rubber bands off some of the packets, as she told me to do, and pretended to be studying the rows of figures; but I was only sparring for time, trying to think up some kind of come-back.

I knew all about those statements and I didn't have to look at the figures on them to refresh my memory. I'd been worrying about those figures, off and on, for a mighty long while.

A man's bank balance is the surest guide there is to his progress in the world, and mine showed I wasn't progressing at all—or even standing still. I was gradually slipping back, and had been doing so ever since I hit the booze trail.

Before, whenever I fell to brooding on this matter, I'd always look for comfort in my favorite way—that is, by taking a stiff drink of whisky. But there wasn't any chance for that now. The supply was cut off. I had to face the music.

It was mighty unpleasant music too. I couldn't think of any reply to my wife, and she went right ahead in giving me what I deserved.

She reminded me, for one thing, of a span of worthless horses I'd bought at the last county fair. I'd paid a big price for the horses, and one of them died the third day I had him, and I sold the other for a fourth what I gave for him.

"And you were drunk when you bought them," said my wife, looking at me in a [CONTINUED ON PAGE 21]

A Living from Poultry

By G. W. Church

Don't overlook good drainage, shade, and windbreaks when locating a poultry business

A CASH income of $600 to $700 a year from the skim milk fed to the chickens is the profitable plan being worked on a Pennsylvania poultry farm. While visiting this farm last fall I at once thought of the many thousands of FARM AND FIRESIDE poultry keepers who would be interested in knowing about using the by-products of a dairy to decrease production costs.

This farm regularly keeps from 700 to 800 layers, and rears from 800 to 1,200 young birds annually with which to replace the hens turned off. It was found by Mrs. C. A. Stranahan and sons, who own this farm, that the cost of each chick grown to laying age and each hen for a year's laying required from 30 to 40 cents' worth of commercial animal food to insure maximum results.

Thus the by-products of a dairy has supplied the animal food needed. Practically all the skim milk from the product of 22 cows was being consumed by the poultry—young stock, breeders, and 850 layers.

This poultry business has passed the experimental stage. Fifteen years ago, Dorr, one of Mrs. Stranahan's sons, was induced to take upon his shoulders the task of developing their poultry ideas into a commercial proposition. Some of the poultry houses then built are still giving service, but with the growth of experience the inexpensive dirt-floor houses are being replaced by more permanent cement-floored buildings with rat-proof foundations and draft-proof walls.

These poultry keepers have no use for dropping boards for large-sized operations. The space beneath the roosts is enclosed with a movable partition to prevent litter and scratch grain from becoming soiled by the droppings. Sawdust and dried muck are used under the roosts for absorbents, thus making possible the less frequent removal of the manure instead of the daily or frequent cleaning of the dropping boards formerly required. The manure and soiled litter are spread with a manure spreader at one operation.

The poultry-building equipment now in use on this farm consists of three large permanent houses not much under 100 feet in length and 14 to 18 feet wide; also a house 16x40 feet for brooding newly hatched chicks. This house is divided into three compartments, heated by two coal-burning stove brooders. Another smaller brooder house is equipped with a stove brooder, and other colony houses can be supplied with lamp-heated hovers should a cold wave make artificial heat necessary for older chicks.

The hatching is done by four incubators, which furnish good hatches of strong chicks, but in brooding the chicks these poultry experts have found it advisable to brood a less number of chicks to each stove brooder than the usual rated capacity. The chicks are enclosed near the hovers with a light board partition for several days to prevent straying and to exclude drafts.

From the large brooder house the growing chicks are divided into smaller flocks in movable colony houses as their well-being requires. Having ample acreage, the colony houses are placed where the growing chicks get opportunity for fresh range in pastures, corn, potato, and root fields; and later they glean the harvested fields.

Early in October the pullets and older laying stock are placed in their permanent winter quarters, and with a little conditioning are soon in full lay. Then all yards and runs are plowed and sown to rye for early spring use and until clover and other green feeds are ready.

The feeding of the chicks and laying stock does not differ materially from the practices now quite generally common among many successful poultrymen, except that sour skimmed milk takes the place of all meat feeds from the chick's first feed until the birds are turned off as broilers, roasters, or for other purposes.

Eat a Lot of Milk Solids

THE milk is never fed until it is sour, and the watery portion is drained off as a feed for pigs. Thus fed, the chicks and older birds can consume a greater quantity of the milk solids. This skim milk has an additional value besides supplying the animal protein, and its entire feeding value can be counted not far from $700 annually in combination with the other feeds used. Experience has amply proved to the Stranahans that milk-fed chickens and hens have a lower rate of mortality than where no milk is fed. This holds true with the breeding stock when kept to the age of three years or more.

Another aid to the growing of their young chicks which appealed to me is a large chickyard surrounded by a thick evergreen windbreak hedge which serves as a protection from cold winds for the young chicks when they are changed to the movable colony houses, also as a screen for them when pursued by hawks, crows, or other enemies. During the late fall and mild winter weather, breeding stock can also have the run of this hedge-protected yard to their advantage. Great care is taken in selecting the heaviest laying one- and two-year-old hens to mate with the choicest males for the breeding pens.

In addition to the chicks hatched for renewing their stock, about 2,000 baby chicks are sold each year to customers living within driving distance, who come for their chicks when notified. This part of their business has done much toward developing a thriving poultry industry near them. The attractive, vigorous, heavy-laying strain that has been built up insures chicks that give good results when safely delivered without long, injurious travel. So, too, the continued success of the Stranahans' poultry operations carries conviction to all beholders. Their operations, being based on practical efficiency rather than on show, appeal to those who are considering the matter of getting into poultry on a business basis.

Several hundred cockerels not required for breeders are sold as broilers and milk-fed roasters. These, of late years, are shipped to a city market about 50 miles distant instead of to New York City, as formerly. The price received per pound is slightly less, but the lessened shrinkage results in larger net returns.

The strain of White Leghorns kept by the Stranahans is one that has been virtually made over from a fashionable strain, and, while the aim is eggs first and last, the beautiful snow-white plumage and chalk-white eggs, which are standard in size and shape, command the premium price in the New York market, where all eggs are shipped.

During the winter season the layers are fed a considerable portion of their scratch grain in the sheaf to furnish additional exercise, which has been proved to be a matter of prime importance in keeping layers, breeding stock, and growing chicks in the best possible condition of health and thrift.

Now I come to the dollar sign, which at present is of super-importance. Contrary to the belief of many poultrymen that poultry will not pay at present prices of feed, the net profit per hen for 1917 was greater than during any previous year of the Stranahans' experience. Their net profit was not less than $2 per hen. In 1905 the net profit was $1.25, and in 1906 only $1, from flocks of 600 and 700 respectively. All supplies like coal and oil for brooders, incubators, egg cases, and new equipment of every kind are charged to the hens, but they are given no credit for the eggs and poultry used by four families.

These poultrymen have kept exact accounts for the last fifteen years, and there is absolutely no guesswork as to what their poultry is doing for them. At the time of my visit—September 1, 1917—the total receipts from poultry were $2,820.54. Of this, $2,232.32 was received from market eggs shipped to New York; $206.50 for day-old chicks; $381.72 for hens and roasters marketed up to that date. The expenditures for all purposes, including feed, oil, coal, etc., amounted to $1,326.50, leaving a profit of $1,494.04 for the first nine months of 1917. At that date there was a quantity of feed and other supplies on hand, and fully $250 worth of poultry stock to be marketed.

In addition to the nice net sum realized from poultry, the Stranahans' income is swelled by dairy products to a total that makes their combination enterprise a most satisfactory business for them.

It is, however, the poultry business on which their energies are centered for a living and surplus profit. The dairy, for the labor and capital entailed, would not be sufficiently profitable to be continued as a separate enterprise. What makes the cows really worth while is selling the skim milk in the form of eggs and fancy chicken meat.

An almost unlimited demand greets such milk-fed roasters as these

When You Ask Your Banker for a Loan

By Francis H. Sisson

WHEN you ask your banker for a loan his whole reaction to your request is summed up in the question he asks himself: "What security can he give?" He may express his decision immediately and without mentioning security, even the security of your word to repay, or he may delay it for days and not only mention but also investigate the security with the greatest care. His general mental process is the same in each case. It differs in extent and intensity, but always before you get your loan he has made a definite decision, either express or implied. In its last analysis that decision is based upon information.

To ask your banker for a loan is not a confession of financial weakness. On the contrary, if you get it, as you expect to do when you ask, it is a testimonial of your financial strength. Those who would attach a certain odium to the borrower of money from a bank forget that the bank itself is really a borrower of the money which it is lending, and that its profit is to come out of the difference which the banker can effect between what he pays those from whom he borrows and what he gets from those to whom he lends.

The making of loans is recognized everywhere as essential to carrying on business. If you should get $50 or $75 from a bank to pay your taxes or insurance premium, you are performing the same operation as the syndicate of business men who borrow millions from a dozen large city banks to meet the initial expenses of some enterprise, or as the United States Government, which borrows billions from banks and citizens everywhere to meet its war expenses. The differences are largely in the amounts. The principles that are adhered to in making such loans are the same.

When you ask for a loan from a bank there are three questions which must arise in the mind of the banker. They are: How much do you want? How long do you want it? What are you going to pay for it? Unless the rate of interest is fixed by law or custom, he cannot reduce his requests for information to less than these three questions.

The banker probably knows you either by long association with you or by reputation. He knows your business, your habits, your honesty, your possessions, your abilities—he knows all about you there is to know, and if his information leads him to believe that you will pay when you say you will he will lend you the money.

The Bank Must Play Safe

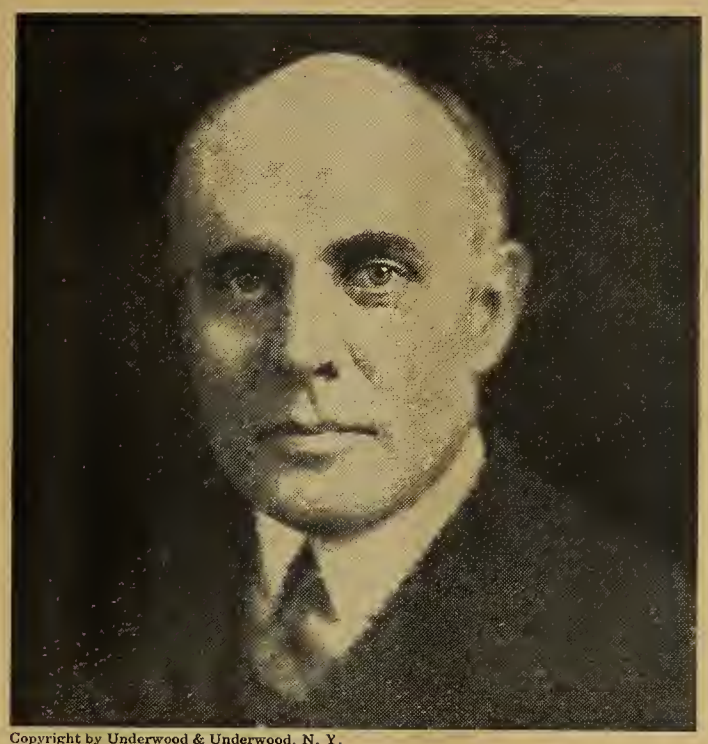
UNLESS the law requires additional security, such as an endorser, he will give you the money without further investigation or security. You leave with the banker a written promise to pay and nothing more, and this is so highly regarded by the banker that in balancing his books he sets down this promise to pay as one of the assets of his bank.

Should you ask for a sum which the banker judges to be beyond the immediate requirements of your business, or if you want it for a time so long as to lead the banker to think that you might die or cease to be as punctual as usual—in other words, if the amount or duration of the loan increases the uncertainties of repayment, the banker will ask more questions.

He will ask: What do you want it for? How do you expect to be able to repay? Do you think you need as much as you say you do? If your answers impress the banker favorably, he may next ask himself whether he can afford to let you have so much. He must always be thinking not of himself and you alone, but of all the others in your community who may want to borrow and who are entitled to the same accommodations as you.

So as the amount increases the banker's responsibilities increase, and, to secure himself against the additional risks, he will probably require, besides that of yours, the signature of one or more men equally as reliable. If the risk is still greater, he may require you to turn over to him a mortgage on your land and buildings, or on your live stock and farm machinery, so that if your crops should fail, or your death or a poor market should render them of less value, the bank would be able to get back its money on time.

Should he make such a demand he would assure himself as far as possible that the mortgages were correct and that the conditions to prevail at the time the loan is due would be favorable to a disposal of them. He would consider every element bearing on the certainty of getting all his money back at the right time.



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Mr. Sisson is vice-president of the Guaranty Trust Company of New York

These comparatively simple operations are carried out in all loan transactions. It may be remembered that a great number of them are carried on simultaneously, and that the object of the banker in making sure of prompt payment is to keep a certain amount of money in his vault at all times, or to have in hand securities readily convertible into cash.

His loans are always greater than the amount of his deposits actually on hand. He has figured out carefully how much greater they can be with safety, and any failure to repay them upsets his calculations. The loans made—that is, the money which he permits to be due him—are always nicely adjusted to the demands likely to be made by depositors for the return of their money, and upon maintaining this balance depends his successful conduct of the bank.

If the bank's funds are lent indiscriminately or without the best of securities the results would be disastrous. Two things are imperative: Loans must be made so as to fall due at such times as will insure a steady stream of money into the bank, and the securities for these loans must be such that if the loan is not paid promptly they can be turned into cash.

Keeping in mind this attitude of the banker, suppose that you approach a bank for a loan: You will probably select your bank because you are better known there, but whether the banker knows you or not the same procedure would be followed in any transaction involving more than a few hundred dollars. You want money to meet your current debts, or to purchase machinery or materials, or to get your goods to market.

If your net profits at the end of a year, whether large or small, are not sufficient to meet all of your expenses for the coming year, or so much of it as must elapse before you begin to get paid for your products, you will have to borrow some money. It may be that your profits are large enough, in the case of which unusual prosperity you would probably want to borrow just the same—not to pay running expenses of your business, but to invest in extensions of it.

When you go to the bank, the banker learns that you want a very large amount of money, the time for which you want it, and that you are willing to pay well for the use of it. Knowing that the banker will ask for it, you will have brought with you a list of the collateral which you intend to place in the banker's hands as protection for the bank. This may be securities, land, live stock, grain, and so on. Your banker knows just how much these are worth in the market and what the chances are of disposing of them at a good figure.

No further inquiries may be necessary. He agrees to let you have the money, and after bringing the securities and other evidences of property to the bank you sign an agreement that should you fail to pay the debt the banker may sell the property. Should they bring more than the amount of the debt, the surplus will be returned to you.

Should they bring less, the bank might bring suit against you, and under court authority seize something else of value to make up the difference. The banker has probably also required that the promises to pay which you have made shall be endorsed by one or more reliable persons, and if the debt is not paid he will look to these persons to reimburse the bank.

Can Give Your Crop as Security

NOW, it may be that you desire to secure your loan by giving a mortgage on your farm or crop or live stock—that is, to surrender tentatively for the present, and absolutely if certain conditions are not fulfilled, the products which you intend to grow with the money you are borrowing. The banker of course doesn't wish, at the end of the year, if the loan is not paid, to seize the things grown—cattle, grain, and so on. What he can do is convince himself that this will not be necessary.

To do that he sends a man to make an inventory of the land, buildings, machinery, and stock. He will observe how your business is conducted, whether efficiently or not. He will examine your books and accounts. Everything that throws any light on the value of your property or prospective crops as an offset to the amount of money to be borrowed is gathered for the information of the banker. If this information warrants it, the banker will agree to the loan.

If you haven't very much property, your loan must be secured by your prospective crop returns.

Now, in the case of such crops as cotton, tobacco, or coffee, which can be grown in certain territories only, and the circumstances surrounding which increase the accuracy of estimates on the amount of them, growers have always been able to borrow with these prospective crops as security.

With corn, wheat, oats, and rye the case has been a little different. Bankers have felt it unwise to make loans up to the full value of these crops, with the prospective crops themselves as the sole security, because of the chances that through frost, rains, or blight of some sort the amount and value of the crop to be gotten from a certain number of acres might fall far below the estimates. When you borrow on prospective crops you will be asked to disclose all the information bearing on your prospects of a successful crop.

Loans are merely the counterparts of investments, and because the banker owes duty first to those who have intrusted their funds to him for investment he exercises all this care in making loans. His responsibilities increase not only when the amounts loaned increase, but also when those who borrow or the security upon which they borrow are far removed from his community.

The home of the Guaranty Trust Company

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GOODYEAR AKRON

World-Wide Supremacy

IN its last fiscal year this company made and sold more pneumatic automobile tires than any other maker in the world.

From the great Goodyear factories more than 5,300,000 tires were delivered into the public's hands—the largest number ever marketed by one company in the same length of time.

The immensity of this figure can be realized only in the knowledge that the total American registration in 1917 was approximately 4,600,000 cars.

Thus, despite the competition of more than 200 other tire makers, Goodyear attained an average of better than one tire to every motor car in the land.

Nothing that we have ever said of Goodyear Tires, whether in these pages or elsewhere, compares with this indorsement by the American people.

Such superiorities as we have claimed for our product, such declarations of quality as we have issued, are here more powerfully verified than by any words.

In elevating Goodyear Tires to the position of supremacy they now occupy, the public does so not only by force of its opinion but by the dollars it spends.

The belief of the average car-owner in the goodness of Goodyear Tires is a belief on which he is willing to stake not alone his judgment but a considerable investment as well.

Notable as is the size of last year's record volume, size is not at all the most significant thing about it.

The significant thing is that this total climaxes a production that has been steadily and irresistibly increasing.

Not for one year or for two, has the appeal of Goodyear Tires for the public been strong, but for year after year without break.

The pace of this institution's growth almost since its inception, has been in direct ratio with its acquaintance among the people.

It cannot justly be said that either salesmanship or advertising has been mainly responsible for Goodyear's great growth.

Salesmanship and advertising appeal chiefly to new business, there is not enough of it in the country to absorb this great volume.

Far more potent than either of these in the success of this company, has been the goodness of a product which held old customers while gaining new.

It is from this source largely that our business has flourished, out of the satisfaction of the public it served.

The policy on which this institution has been reared is so simple as to be an inspiration for us all.

That policy, as expressed in our labors and dealings, is "the more we put into our product in goodness, the more we will take out in sales."

Because we will continue to exercise this policy, this business will continue to grow.

Because it is the foundation and insurance of our present supremacy, that supremacy will not be surrendered.

Goodyear Tires, Heavy Tourist Tubes and "Tire Saver" Accessories are easy to get from Goodyear Service Station Dealers everywhere.

The Goodyear Tire & Rubber Co.
Akron, Ohio

GOODYEAR CORD TIRES

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FEBRUARY 1918

Why Germany Can't Win

THE Germans can never win this war! Even if the Kaiser defeats Italy; even if he defeats France; even if he makes peace with Russia and Roumania; even if he continues to have his way in the Balkans and Poland—even then the Kaiser will not be in as strong a position as Napoleon once was.

And Napoleon, his armies bled white with victories, was finally defeated, and spent his last days in exile at St. Helena.

Even though the Kaiser should be victorious on land, it would be short-lived, and the spoils would have to be returned and full reparation made. Why? Simply because the United States, Great Britain, and Japan can still shut the Germans from the seas. With free access to the raw-material resources of practically the whole world the Allies can maintain an economic blockade of Germany until the German people will establish a people's government with which lasting peace can be made.

The United States and Great Britain will never surrender. If worse comes to worst, they will continue the war against Kaiserism on the sea and in the air until the Germans will gladly make a lasting peace.

But the Kaiser hasn't defeated Italy. He hasn't defeated France. The Allies are getting stronger every day as the United States throws her gigantic weight in man power and resources against the Kaiser, while the Germans were at their zenith in the opening days of the war three and one-half years ago and are getting just that much weaker every day.

The same thing that defeated Napoleon will defeat the Kaiser. What? Sea power. No, the Germans can never win this war!

Your Income-Tax Report

INCOME-TAX reports must be in the hands of the collector of internal revenue before March 1st. Only on a showing of sickness can an extension be secured, and then for only thirty days. Any delay in filing may result in an imposition of a penalty amounting to 50 per cent of the tax.

If you are unmarried and made in excess of $1,000 in 1917, or are married and made in excess of $2,000, you will be obliged to pay the Government a share of your earnings. While the report must be filed by March 1st, the tax itself need not be paid before June 15th.

The important thing, however, is to get in touch with the collector of internal revenue for the district in which you live and secure the proper blanks in time. Your postmaster or banker can tell you who the collector is and where he lives.

While it is difficult to figure a farm income, you must do the best you can, and swear to the result. Figure out how much you have taken in between January 1, 1917, and December 31, 1917, from live stock sold, crops sold, rents received.

Then over against this set the items of expense for hired help; seed; stock that dies during the year or is killed by order of the health officers; taxes, except those for local benefits, such as local drainage, roads, and so on; interest on borrowed money; bad debts, and so on. The law also allows a deduction of $200 for each child under eighteen years of age.

After your net income is computed, these are the taxes to be assessed thereon: First, the normal tax of two per cent on whatever is in excess of $4,000 if you are married and $3,000 if unmarried; second, the extra war tax of two per cent on whatever is in excess of $2,000 for a married man and $1,000 for a single man.

Thus, if you are married and made a net income of $4,500 in 1917, you will pay two per cent on $500—the amount in excess of $4,000—or $10, and two per cent on $2,500—the amount in excess of $2,000—or $50; a total tax of $60. If your income is $2,750, you will simply pay two per cent on $750—the amount in excess of $2,000—or a $15 tax altogether.

It will be a good plan to figure out your income at once, and get in touch with the proper revenue authority before March 1st.

What Patriotism Means

PATRIOTIC observances in past years have been left too much to the schools. Teachers and pupils have celebrated the memory of George Washington and Abraham Lincoln, have observed the anniversaries of notable battles, have held exercises in honor of Flag Day, while often the communities for the most part have gone unmindful on their way.

This year, if ever, patriotism is for the whole nation, and every national day, breathing the spirit of patriotism as handed down from the glowing past, should be observed by the whole nation.

It is not too early to begin planning for the observance of Lincoln's Birthday and Washington's Birthday, two days highly significant to us who are now engaged in a great war to carry out the purposes for which they led the nation to victory.

Why not have, in every community in the United States, on each of these days a program breathing the patriotism of the past, the patriotism of to-day, and the patriotism of the future toward which we are looking?

In the towns probably an evening program will be best. In the country an afternoon program, in co-operation with the school, will usually work out most satisfactorily. The details will necessarily differ in different communities. The important thing is to have the days observed by all the people. It will hearten and consecrate the nation.

Song Makes Us All Kin

IT IS said that the young men of our armies now in training camps do not sing as much as do the soldiers of other lands. They whistle, but apparently they are not given to song.

On the other hand, those who know our people know that they are fond of song. Anyone who has ever attended a singing school of the kind that was once more common than now, especially in the Middle West, is familiar with this fact. The truth is that the young men of America sometimes fail to sing because they do not know the words of the songs.

Why not, then, now that so many of "our boys" are in training camps and so many homes a little bit lonesome, make the remaining months of this war winter a time for song revival? There is nothing like music to give expression to our pride and patriotism when we are feeling fit than to join with our neighbors in a soul-stirring song.

What a fine thing it would be if everywhere the people would join in community singing! And there is no better time for this than during the long winter evenings. Song draws people together, makes them more "human," more considerate of each other, and more ready to co-operate in any worth-while common cause.

Why not at least make a start? In every community there are men and women capable of leadership. If nothing more could be done, it would be worth more than many may imagine for the people to just get together and sing our patriotic songs.

Wouldn't it be a splendid thing, too, if bands of singers could visit every farm home from which a son has gone to training camp or to the fighting front, and in a spirit of patriotic appreciation sing "The Star Spangled Banner" and other songs dear to Americans? How proud it would make the parents feel, and how much of joy and gladness it would bring to the lad in khaki to know that he was thus remembered! Greatest of all, though, would be the effect on the singers themselves.

When Growers Get Together

THE shrewdest, most efficient corporation would be delighted to achieve the results that co-operation has won for the citrus growers of California. The annual report of the California Fruit Growers' Exchange—a strictly co-operative, non-profit organization with 8,000 members—shows a business for last year of more than $33,000,000, without having had a loss of a penny through bad debts or other cause.

This organization has now been in operation for fourteen years, and has marketed co-operatively more than a quarter billion dollars' worth of citrus products, with an average loss of less than one cent in $300 worth of products sold.

All services connected with this enormous marketing industry is performed at absolute cost, and the unusual gratifying success has come through the willingness of the members to stand by the fair and economic principles of co-operation, even during the days of discouragement when the organization was struggling to find a safe and profitable outlet for its products.

Since the exchange was formed the citrus growers have been getting more for their fruit, and consumers have been paying less for a better product. Truly, there is an object lesson here.

Now for the Ice Harvest

ICE is a saver of food. Next summer, when the hot days come, the family with an icehouse filled with ice will be doubly fortunate. Not only does ice make possible the utilization of left-overs, but it results in the saving of much more that would be wasted.

In the care of milk and butter, ice is almost indispensable. It insures the family a wholesome product, and where there is a surplus to sell it enables the buyer to get it in the best of condition.

Where there is now an icehouse, preparations should be made for filling it. Sawdust ought to be provided in advance, and the house cleaned out. Also, if repairs are needed they should be made before time comes to fill the house. In the southern part of the natural ice region the season for harvesting the crop is short at best, so that failure to be ready to take advantage of ice-making weather may mean an empty icehouse the following summer.

Unless convenient to an ice plant, where the manufactured product can be purchased at a reasonable figure, it will pay to build an icehouse. The cost is not great, and for the average family the house need not be large.

Next summer, food may be of even greater importance than it was in 1917. At least, we know that we must save. Labor, too, will be a bigger item than ever—and to the woman who does her own work ice is one of the greatest of labor-savers.

While ice is not food, the full icehouse next summer will make for food conservation. It will also help to make it possible for the housewife to provide appetizing meals for the men-folks while they are busy doing, not only their bit, but their best.

If You Visit the School

"MY BOYS don't seem to be getting along the way they ought to in school," a friend said to me the other day.

That is a common complaint. Many boys aren't getting along quite the way they should. The teacher knows it, the father knows it, and sometimes the boy knows it, though usually they don't talk it over together. But the teacher alone can't stop it, the parents alone can't stop it, and usually the boy himself, unaided, can't stop it. There is just one way to stop it—and that is by co-operation.

No father is so busy that he can't take an hour or two to visit the school. You can find out more in an hour in the schoolroom than you can find out in a day talking with your children or your neighbors, or even with the teacher herself outside the schoolroom.

If you stay in the schoolroom until school is out, you can have a good talk with the teacher. You will have discovered some things by listening to the recitations. She will be ready to talk freely to you, because you have shown your interest in the school. You doubtless can help her with some suggestions, and she can help you. The two of you, co-operating with the boy, can solve the boy's problem.

MAXWELL

Most Miles per Gallon — Most Miles on Tires

Horse-Pace Family!—You Have Come to the Turning Point

Business-Farmer—to be longer without a motor car may affect the whole of your success, and the whole of your family's future.

Have you noticed lately that somehow the good chances that are missed by you are seized by others—others who have automobiles?

Have you noticed that, though some men you know of turn every hour and minute into profit, *your* work goes slow, *your* time is spent in fretting against delays—and that you are getting into the habit of letting many a good chance pass because you "wouldn't be able to get there in time?"

* * *

Have you noticed that your family—your girls, your boys, your wife—are steadily, steadily getting out of touch with those they ought to know? Have you realized that the families which surround you—automobile families—have a circle of friends and interests, and a radius of easy visits, far larger than your family? Open your eyes.

Have you noticed how many times you and your family have been placed under obligation by neighbors who have cars? Aren't you tired of asking favors?

* * *

Your environment is moving at automobile pace. You and your family are limited to horse-pace and horse-radius. And in the next few months the paths of automobile families and horse-pace families will separate still more sharply. Only motor-pace will do for the conditions in which this nation is now doing its work.

You stand at the turning point.

* *

Motor-car service now costs less than horse service for all the work that a motor car can do.

And of all motor cars of equal service the one that costs least to run and least to own is the Maxwell.

Investigate this while these cars of greatest efficiency are still procurable. Write us a letter today.

Touring Car $745; Roadster $745; Touring Car with Winter Top $855
Roadster with Winter Top $830; Berline $1095; Sedan with Wire Wheels $1195. F.O.B. Detroit

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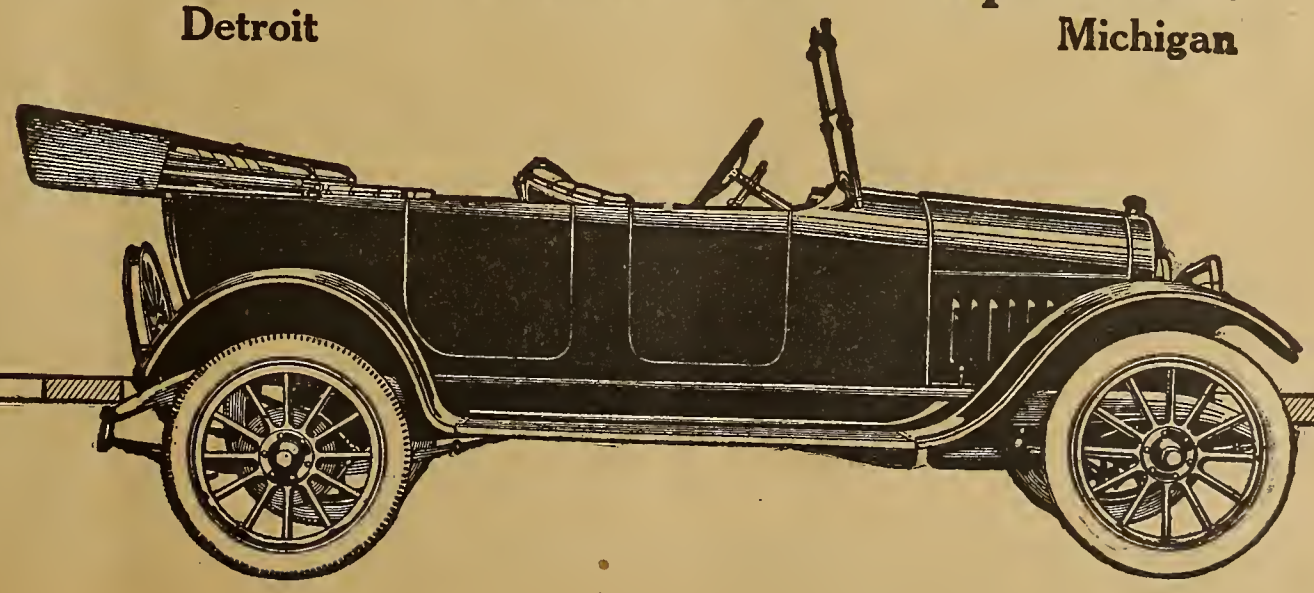
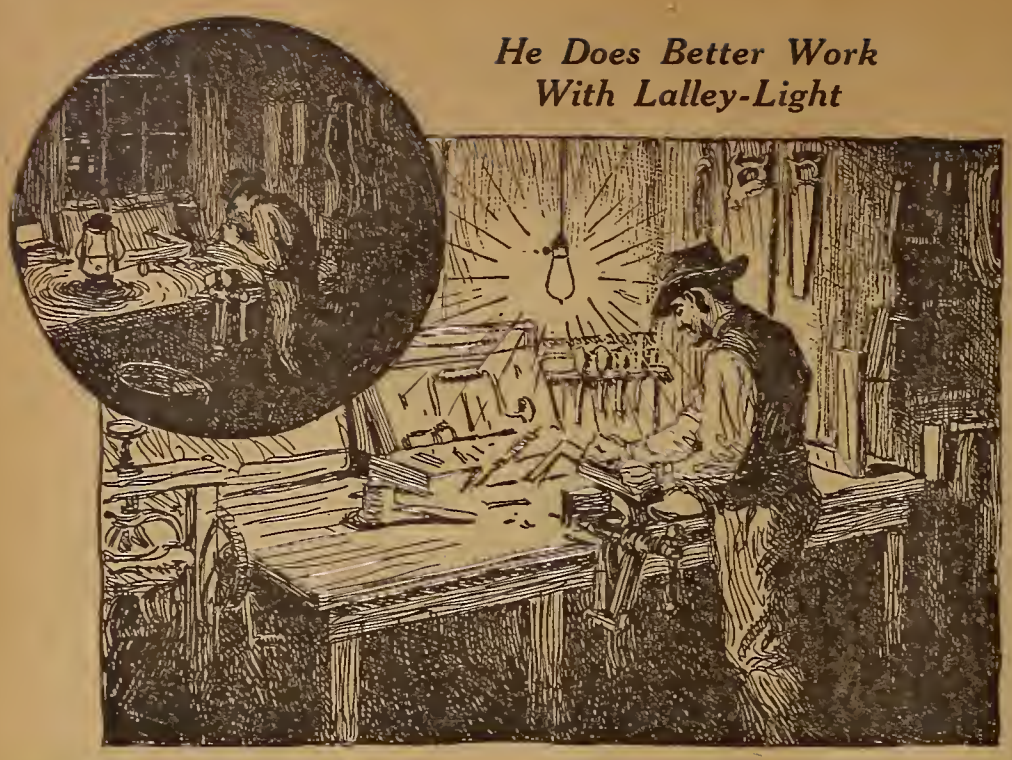
Write Today for Catalog W

Maxwell Motor Sales Corporation
Detroit Michigan



He Does Better Work With Lalley-Light



Three Moving Parts Instead of Sixteen

On thousands of farms, Lalley-Light is known especially for its constant reliability, its economy, and its long life.

Because of the engine's extreme simplicity it has gained this national reputation.

Where the ordinary electric-light-plant engine has sixteen moving parts—often more—our engine has only *three.* In fact, there is no other light plant that we know of which compares with the Lalley on that score.

Think what such simplicity adds to the life of Lalley-Light—what it saves in wear and tear, adjustment and repairs.

Lalley-Light engine was designed especially to run a direct-connected electric generator.

It has big ball bearings at every point where split babbitt or roller bearings are commonly used. It has sure-fire magneto ignition. It is water-cooled.

It runs with steam-engine steadiness. That is why light direct from the generator is as unflickering as from the battery.

There seems to be no wear-out to this engine. Lalley-Light plants installed more than seven years ago are giving today the same good service they gave in their first year.

This record shows Lalley-Light reliability as nothing else can show it.

Lalley-Light brings electricity to the farm—unlimited light and power in their *safest, surest* and *simplest* form.

It gives you clean, bright light whenever and wherever you want it.

Its power will run the pump, separator, churn, grindstone and other small machinery at a cost of a few cents a day.

Lalley-Light furnishes electric current from *two independent sources*—generator and storage battery—actually giving the service of two plants for the cost of one.

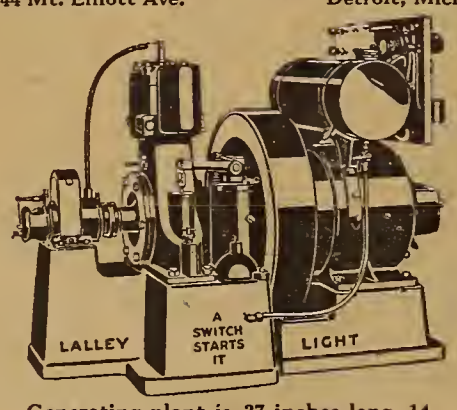
It saves labor and improves living conditions. It increases the value of your property; it reduces fire risk and insurance rates.

This is the time to figure on installing Lalley-Light.

Write us for the illustrated booklet describing completely Lalley-Light for your home.

If you desire, we will also advise the name of our nearest branch sales office who can show you this efficient plant in operation.

Lalley Electro-Lighting Corporation
1844 Mt. Elliott Ave. Detroit, Mich.



Generating plant is 27 inches long, 14 inches wide, 21 inches high. Storage battery is included in complete outfit.

LALLEY-LIGHT
THE BALL BEARING ELECTRIC LIGHT PLANT

So You'll Escape Pneumonia

By CHARLES H. LERRIGO, M. D.

I NEVER heard a funeral sermon preached from the text "It Ran into Pneumonia," but many might well be, and especially at this season of the year. If such a sermon were preached and the preaching done by a man who knew whereof he spoke, he would be obliged, in honesty, to say: "This funeral service means that someone was careless or ignorant, or both. Perhaps it was the subject himself, perhaps he steadily refused to give heed to the warning cough, perhaps he insisted on resuming his work too soon after the grippe or measles, perhaps he swathed himself in warm clothing, slept in close rooms, neglected bathing his skin, and then went forth into a biting, cold atmosphere that easily conquered him. I know not who did it, I know not how it was done; but somewhere someone was guilty of carelessness."

Yes, pneumonia of the type known as broncho-pneumonia is one serious disease that slight ailments may "run into" if neglected. This type does not come forth full-fledged as a dangerous disease, but begins as a cold, an attack of bronchitis, grippe, measles, or some similar catarrhal disturbance. If properly cared for in the initial attack the pneumonia does not develop, so we are obliged to say of almost every attack of broncho-pneumonia that somewhere someone was careless.

There is another type, recognized by doctors as specific, in which contagion is a marked causative factor. It is "catching."

"Pneumonia catching? What absurd idea is this? Do you mean to tell us that this also is a germ disease?"

That is exactly what the medical profession means to tell you, and we hope to tell it so emphatically that you will avoid exposing yourself unnecessarily to its contagion; that you will not come into close personal contact with a patient, will avoid the use of the same dishes, towels, or sheets, and will insist that the sputum be received into a sputum cup or old cloths that can be burned. Let this one item of information strike home and you will not have read this article in vain.

It is not always easy even for a physician to diagnose pneumonia, and is a hard matter indeed for a layman. Most significant is rapid and difficult breathing, accompanied by fever, the symptoms not intermitting but being sustained steadily or increasing in intensity. If preceded by a chill it is all the more significant.

The rate of breathing should be counted when the patient is lying quietly in bed, and without his knowledge. Count the rise and fall of the bedding over the chest, the up and down movement counting one respiration. In health the adult rate is 14 to 18. If the rate is above 25 it means real trouble, though it must be borne in mind that young children breathe more quickly and may have a respiration rate around 30 without being very ill. In case of doubt keep the patient in bed, for pneumonia is our most deadly disease, and the best early treatment is rest.

Train Your Skin to Work

There is less difficulty about diagnosis of the contagious type, that known as lobar pneumonia, because it usually begins suddenly, probably with a hard chill, and is markedly dangerous from the beginning. It is in this variety that there is so much pain, and the sputum, as the case progresses, is called "rusty," because discolored by blood streaks. Another feature is the sudden crisis that often marks a favorable ending, the temperature dropping to normal in a few hours.

In pneumonia the element of physical resistance is a great factor in prevention. Our best defense lies in ourselves, our blood corpuscles, and the natural antitoxins we develop.

Against bronchitis and broncho-pneumonia, the bugaboo of the person who "takes cold easily," an especially good line of resistance is developed by educating the skin. Try it the next cold day that comes to make you feel shivery. Don't yield to the shiver. Command your blood supply to heat up that shivering skin. Give the command both mentally and by vigorous muscular movements. Very soon the blood will come and the skin will be warm. Good circulation is a fine sentinel against colds.

The skin and the loose tissue beneath can hold one fifth of the blood of the body. Educate your skin to make this blood flush the arteries at command. Every morning, preferably in a warm room, go over the whole body with cold water. A bath tub is a convenience, but not a necessity; a sponge or wash cloth and a bowl of water will do. Have two large, warm towels to rub dry. Then rub briskly with the hands until the skin is in a glow. Warmth in moderate degree is always an agreeable sensation, but there is no way of producing it equal to this. You are filling the vessels, not by relaxing, as you do when you stand before a fire, but by stimulating. The arteries become ready for their work and will answer your call at any time. Practice this faithfully and you have reduced your risk of pneumonia 80 per cent.

Treat a Cold Promptly

Do not overdress. Add to your clothing in severe weather, but do not go muffled and swathed at all seasons. Remember that wet clothing is not dangerous so long as you are in action, but it should be removed as soon as action ceases. Better a dry rub and lighter clothes than to continue wearing wet garments. Change the underclothing frequently, and never sleep in the same suit that you wear in the day. You cannot expect healthy, resistant skin if you do not give it proper respect.

At the first sign of a chill or cold, get into a warm bed, with hot applications to your feet, drink hot drinks, and create an immediate, forced activity of the skin. It is not necessary to produce a sweat. Stay in bed until you feel improved. It takes a few hours' time, but it is an easy, life-saving method of prevention.

Pneumonia is emphatically a disease for home treatment under the direction of a doctor. Bear in mind that it [illegible]s more victims than any other known [illegible]ease, and that when you begin the fight if it goes on to a finish: either you knock it out or—

So no trifling. Get a doctor if you have to send twenty miles. I positively refuse to suggest medicines. But I will tell you some important measures that you can add to the medical treatment, and I will also suggest that no medicine at all is vastly better than the wrong kind.

REST: Give absolute rest. Remove the patient from the traffic of the household to the nicest, quietest, sunniest room of the house. Do not bother him with a single disturbing problem. This is very important.

FRESH AIR: Keep the room warm but fresh. The patient is gasping for oxygen. Let him have all he can use. Screen the bed from draft. Be very sure that the body is warm, and remember that hot applications to the feet may be necessary even though the fever is high. It is especially important, to prevent a relapse, to maintain body heat during convalescence.

BATHING: Give a cleansing bath every day. If fever is high, bathe with plain, cool water every two or three hours. Be careful not to expose or tire the patient in doing this, but don't neglect it.

DIET: During fever, liquid diet is proper, and an abundance of water. In convalescence tempt the appetite with dainties prepared from milk and eggs. Make the meals small and often. When in doubt *ask the doctor.*

GENERAL CARE: In lobar pneumonia be especially careful to burn all discharges, boil dishes and linen, and have the attendant cleanse her hands thoroughly after waiting on patient. This prevents contagion.

Don't forget that you may lessen greatly your risk of pneumonia in four ways: 1. Keep the skin active. 2. Cultivate body resistance. 3. Take early measures against it. 4. Avoid contagion.

The Car's Tool Equipment

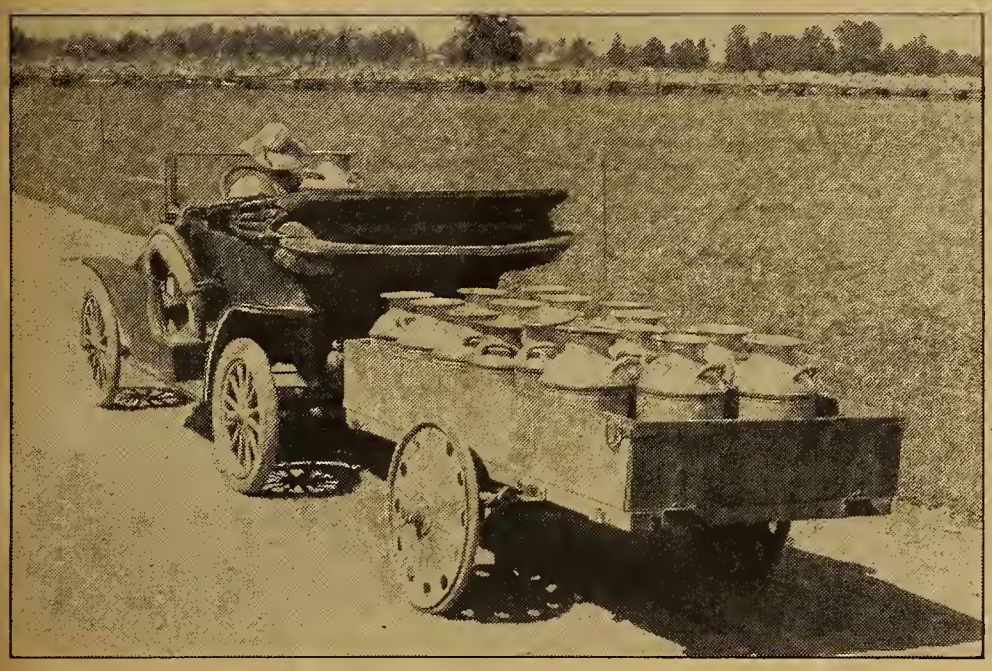
By B. H. WIKE

QUITE frequently we hear car owners, especially new buyers, ask: "Don't you think I ought to have such and such a tool in my car?" We reply that it would perhaps be nice, but there is a line to be drawn on having no more to carry along than is absolutely necessary to make repairs on the road.

Every car, whether new or old, is supposed to have a full equipment of tools, like pump, jack, a few wrenches, oil can, and starting crank. This list really accomodates the probable or average need of any car owner to meet little emergencies on the road. It would be impossible to carry all and every tool that might be needed some time.

A truck might carry such an equipment, but we do not believe very many private owners care to undertake the task, and really do not know of any who presume to do so. What we wish to answer is, "Where is the limit to the number of tools any car owner ought to carry with him?"

You will need a pump to inflate tires. Then come two tire tools for taking the casings off the rim. The jack should be in usable order at all times, for one never knows when it will be needed. About four S wrenches and one good monkey wrench should be at hand. The S wrenches should range at reasonable openings to take in all the nuts that will ordinarily need turning at any time. A



A trailer multiplies your car's usefulness

hub wrench must be carried. On the hub wrench you have an opening not only for the outside cap but also for the nut underneath this cap on the end of the axle shft. Along with the above we should never forget the oil can with enough oil for an emergency.

There is another thing that every car owner should make sure is in his tool box: It is the starting crank. Some cars have them fastened on the front of the car, but the greatest number have the crank in the tool box. You can never tell when you may need it, no matter if your car does have a self-starter.

On very long trips, where one may be at times far from a garage, more tools might be carried, but it is our experience that instead of too many extra tools it would be better to carry some of the smaller parts of the car, like front hub cones or balls, races, spark plugs, fan belt, a small roll of wire, some insulated cable, and extra lamp globes. Include in this, if you will, a good stout rope or towing cable and you may rest assured you have a sufficient tool equipment, unless, as we say, you have ample capacity for carrying more.

Respect for Self-Starters

By W. H. Burke

THE self-starter on the modern automobile is a wonderful but highly efficient apparatus. The greatest percentage of them are electrically operated, taking their current from a storage battery; and because they are of this character it is probably one of the chief reasons why they are not properly understood or are badly abused by the ordinary owner. The function of a self-starter, as the term indicates, is for turning the engine over at the time of starting and doing away with the task of cranking by hand. That it is sometimes fearfully abused when used for pulling the car—at very short distances of course—is a fact borne out by testimony and other ways, and not only is such a practice extremely hard on the battery, but it also injures the starter brushes and windings.

Beginning with the first instant the starting pedal is depressed, the flow of current from the battery to the starting mechanism is very heavy. This heavy discharge should not continue longer than is necessary for the motor to begin operations on its own power, which may be all the way from two or three seconds to not more than one minute at a period. With the starter doing its part, the starting of the motor depends upon the presence of gas in the cylinders and a competent spark at the plug. If the starting pedal be held down too long, the result will surely be damaged brushes and commutator. Damaged brushes must either be replaced with new ones or else trued down to perfect seating on commutator. If the commutator be damaged by the heat that accumulates during the heavy discharge of battery current, it may also need replacement by repairmen familiar with such things, or else put in a lathe and carefully ground down. You will see that any one of these circumstances occasions time and expense in getting the apparatus back into shape if damaged. The brushes and commutator are designed to stand periodic starting discharges of at least a minute's duration, but any instruction book or the makers themselves, as well as any electrician, will say that such unnecessary imposition on the parts of the starter deserves to be met with both expense and trouble. If the motor does not start after several trials with the starter, there is something else needing attention. Nearly all carburetors will respond as soon as the grade of gasoline used will allow them, and too many times the grade of gasoline is the cause for imposing on the starter. In the greatest percentage of cases it has been found that the ignition system is the least at fault in the motor's failure to start. In some cases, too, it is due to ignorance on the part of the driver in not hastening the activity of the carburetor.

Another detriment to a self-starter's activities and life is the improper use of oil. All electrical contrivances must be oiled carefully. If oil gets on the brushes from an overoiled bearing near-by, there will surely be trouble, for the heat will burn the oil to the brushes and commutator and form a non-conducting crust that will cause pitting and act as an insulator. So, even in this phase of the self-starter's career, the brushes and commutator must be kept dry, clean of dirt, and free of oil and water. Care in this will mean long service from reliable starters, which, of course, means much for the car owner's peace of mind.

Neōlin Soles Are Better Soles

For country wear no shoe soles are like Neōlin Soles.

They wear well—much better than most leather you can get nowadays.

They keep your feet dry—they are waterproof.

They won't slip like leather soles on snow or ice in winter or in the harvest field in summer.

They are comfortable, too. They need no "breaking in."

They are better on your dress shoes and on your work shoes.

You can get Neōlin Soles on shoes for men and women and children—either in new shoes or as re-soles. If you re-sole your own shoes, be sure to get Neōlin Taps. But look for the stamp "Neōlin" underneath—you only have Neōlin Soles if the stamp is there. *Mark* that mark; stamp it on your memory: Neōlin—

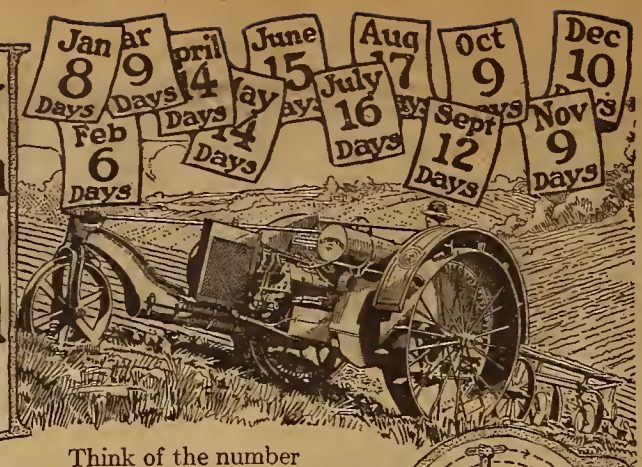
the trade symbol for a never changing quality product of

The Goodyear Tire & Rubber Co., Akron, Ohio

Neōlin Soles

Trade Mark Reg. U. S. Pat. Off.

How many days of man and horse labor could you Save



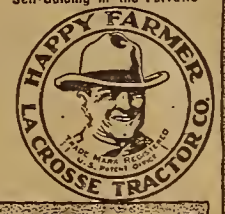
Think of the number of days you could save out of each month with a La Crosse Happy Farmer Tractor on your farm. Roll two or three days' work into one in plowing and preparing the seed bed, in harvesting and plowing again in the heat of the summer. Save time doing your own silo filling—supply your own power for threshing. You will find many uses every day for a

Turns in Its Tracks
Self-Guiding in the Furrows

La Crosse Happy Farmer Tractor

The Perfect Kerosene Burner

The Happy Farmer is **any** farmer's tractor. Because it fits any farmer's needs. Powerful enough to pull three 14 inch plows under ordinary conditions, light enough to handle drills, harrows, manure spreader, hay loader, etc., and so economical in first cost and in upkeep that **any** farmer can afford it.



Burns Kerosene Without Waste

Patented short intake with hot exhaust passing through it completely vaporizes the fuel charge. Twin cylinder motor—each cylinder completely water jacketed means cylinders always round—steady power hour after hour. One-piece unbreakable cast steel annealed frame, 3-point suspension; perfect alignment of bearings.

SEND FOR FOLDER telling all about this modern farm work saver. We have a dealer or distributor near you for prompt service. Address Department 33.

LA CROSSE TRACTOR COMPANY
La Crosse, Wisconsin

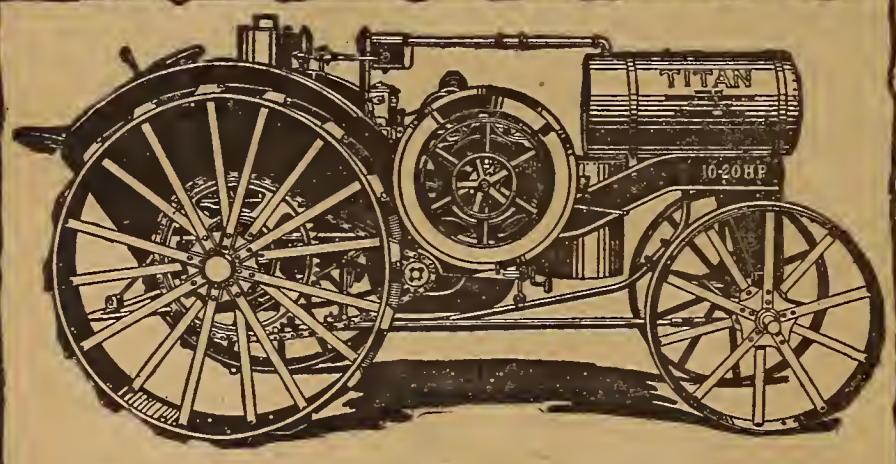
Model B, 12-24 h.p. **$975** Model A, 8-16 h.p. **$685**

Get a Farm Irrigated by Uncle Sam

in Salt River Valley, southern Arizona, under Roosevelt Dam. Raise alfalfa for feeding cattle and sheep. Raise vegetables and fruits for early Eastern market. Buy land now, before it costs more. Deep soil, assured water, reasonable prices, fine winter climate. Write for our Salt River Valley folder free. C. L. Seagraves, Industrial Commissioner, Santa Fe Ry., 1943 Railway Exchange, Chicago.

Free Catalog in colors explains how you can save money on Farm Truck or Road Wagons, also steel or wood wheels to fit any running gear. Send for it today.

Electric Wheel Co.
13 Elm St., Quincy, Ill.



Buy Your Tractor Now

THE tractor is a real help to American farmers now. It is fast taking over all the heavy farm power work.

Kerosene is the best, as it certainly is the cheapest tractor fuel. Therefore all our tractors, **International, Mogul** and **Titan,** are designed, built, and guaranteed to operate successfully on this cheap, plentiful fuel.

We pay particular attention to these three essential features: That our tractors shall operate on the cheapest fuel farmers can buy; that they shall be so simple that any farmer can learn to handle them; and that they shall do enough good work in the field and at the belt to more than pay for themselves.

On this basis we solicit your orders for **Mogul 10-20, Titan 10-20** and **International 15-30** kerosene tractors.

It will be difficult for us to furnish your tractor as soon as you want it. The demand is hard to keep up with and shipping facilities are very much handicapped. Send for our catalogues now, make your decision, and send in your order as soon as you can. Invest in an International Harvester guaranteed kerosene tractor in time for the spring plowing.

International Harvester Company of America
(Incorporated)
CHICAGO U S A
Champion Deering McCormick Milwaukee Osborne

How I Made a Million Dollars Farming

[CONTINUED FROM PAGE 5]

The wages were small, but I saved all I earned. That has been my practice all my life. We paid twice as much for things in those days as we do nowadays, but I needed and bought little. The result was that when I quit the freighting business after five years I owned 18 yoke of oxen, six wagons, and a saddle horse. That was my first property. I was not yet twenty-five, but I had learned the worth of money through having to work hard for what I got. Hard work, coupled with energy, will bring success. Nothing else will.

I came back to Iowa after that Western experience, stouter of body and of heart than ever. I had not struck any gold, but I had learned to strike out for myself. And let me say right now, in passing, I would not work for another man a minute more than I actually had to were I to live my life over again. I would strike out for myself the very first opportunity.

The man who works for another, if he is to succeed in giving his employer value received, never has the time to study the things he wants and needs to know for himself. He must study the things his employer wants him to know. Far better, I say, to work for yourself and then have the time to study the things you need to know for yourself. No man has any business working for another if he can make a day's wages for himself. There have been times when I might easily have envied a mechanic or a man with a trade who was apparently earning more than I was. But I could see farther ahead than they.

When I came back from the West I had a little money, every cent earned by myself. What I have to-day is the increase of that money. Men will tell you that the first thousand dollars is the hardest to earn. I can't say so: they were all hard to earn. I never worked as hard in my life as I worked after I had my first $50,000.

Back again in Iowa, I returned to farming without delay. My father had been thorough in his teaching. I knew farming and stock-raising from A to Z. I invested my Colorado savings in a little piece of land in Cass County—eighty acres—for which I paid $25 an acre. I still own that land to-day; I would not sell it for $250 an acre. Yet the price asked for land does not determine its productiveness or our ability to get ahead on that land. To illustrate:

Why Land at $1.25 Went Begging

My father bought his first land—a quarter section—from the Government for $1.25 an acre. He could not make the payments, even at that price, so the land reverted to the United States. They might as well have asked $100 or $200; if you cannot pay it or earn it the price is immaterial. Four years ago I bought land without even a fence around it for $150 an acre, that I had seen the owner buy for $10 an acre. Of course that had been forty years before. But I am earning more off that land at $150 an acre than he did when it was $10.

Prices are merely relative; earnings are what count. But $150 is as high as I have ever paid for farm land, and I cannot bring myself to go above that figure. I think it is because I have been in England so much. You see, not only was I born there, but for years I went back and saw great, fine farms, 300 to 500 acres or so in extent, as good land as the sun ever shone on, with splendid improvements, which could be bought easily for $100 an acre.

Then to come back to America, and out here to the Middle West, and find land selling for $150 and $200 an acre, with only poor improvements—well, I couldn't bring my mind around to seeing it that way, so since land has gone so high I have quit buying.

I still contend, however, that the man who pays $200 an acre is getting it cheaper than my father did at $1.25, and I at $25. Not only are crops greater and worth more, but money is plentiful nowadays. Back in the old days we saw but little of it. My father had farmed in order that his family might eat. He knew nothing about markets or grain prices, and worried less about farm values. What he did know was that wheat or corn could be ground at the mill to make bread for the family.

Occasionally a traveler passed through our part of the country and bought some corn. But such occasions were rare. When we put in a crop in those early days we had no idea what it would bring—in fact, raising to sell was scarcely thought of, and we never had an established market for corn or live stock until the railroad whistles disturbed the quietness of the prairies and the word was passed around that there was a man at the station building an elevator. We soon learned that an elevator was a place where grain was bought, that the elevator man paid actual money for the grain we raised. This was indeed a bonanza for the farmer who had been hauling corn or wheat 50 miles to Council Bluffs, who had not the slightest idea what it was worth, and who, furthermore, was usually paid in provisions rather than cash.

When $3,000 Mark Was Reached

When I had accumulated $3,000—a lot of money in those days—my brother and I went into partnership handling cattle. We were among the pioneer cattle operators. By going in together we not only had a double capital, but we also had a double credit, and that is fully as important as the other. After this partnership had been going on three years I pulled out, and have been by myself ever since, except for my first venture in the horse-importing business.

Another man and I bought two horses imported from Canada. He was a horse enthusiast, and I also had a strong leaning that way. I sold out my interest to him in a short time and took up importing for myself. It was comparatively new in this country, and there were great possibilities for the man with nerve and capital who was not afraid to work.

I crossed the ocean for my first lot of horses in 1884. It was a big venture. I bought 25 head of Clydesdales. It took pretty nearly every cent of ready money I had. I tell you, there was a lot wrapped up in that old steamship, taking two weeks to get my animals over to this shore. From that time until 1914 I crossed the Atlantic Ocean every year, sometimes twice a year. I was over there when the war broke out.

I became one of the big horse importers in the country. Yet if I were to live my life over again I would not take up this branch of business. I would go in more for speculative live-stock farming—feeding for the market, and so on. Blood lines are all very fine, but the opportunities for the man who buys land at a low price, makes it produce and sells it for more, who feeds cattle and sheep and hogs for the market, are almost unlimited.

To-day I own 1,825 acres of fine Iowa farm land, all in one piece. I own a half-section of Nebraska land as well. We usually have several thousand head of live stock of various kinds. I also own town property. Men say that Peter Hopley is successful, yet I have not done anything more than any other man could have done, nor more than I could do over again were I young.

Folks often say to me: "Hopley, you had exceptional opportunities. You came here when the country was young and land cheap. You got in on the ground floor. Of course you worked hard, but you were lucky. What could you do nowadays? What would you do if you were a young man, poor and without your present experience? You couldn't make it."

They make me tired. If I were a young man again—twenty-five or thirty—and had my wife here with me, I'd make good again; and here is how I would do it: I would hire out to a farmer as a farmhand. I would get $50 a month, for that is the wages of our hands and they are not as good men as I was. But that is not all. I would get

a house to live in, and fuel. I would get a garden, chickens, and a cow. At the end of a year I would have earned $600, and I would have every cent of that $600. I would have fed the family and kept ourselves on the products of the garden, the chickens, and the cow. I would work another year. By that time I would have earned $1,200. I will allow $200 for unforeseen and unavoidable expenses. I would have $1,000 left. But that is only half the story. By that time I would have a credit of $1,000 to $1,500, because the banker would know me, would know I was a hard worker and a good saver. He would see me coming in every month with my pay check. He would look at my account and see that I was not drawing out any of my money. Believe me, the banker soon gets to know the man who deserves to get ahead, who is worthy of credit.

Well, at the end of two years I would have $1,000 in cash and credit, we'll say, of $1,500 more. I would buy two good cows and about three teams of horses—good horses, but cheap, and out of which I could get hard work. I would go around to some sales and buy good second-hand machinery, for you can pick up bargains that way, just as good as new and for half the price. I would buy a flock of sheep and a few sows. Then I would rent a farm, and my wife and I would start in for ourselves. We'd raise all our own food; we'd be up with the sun, and we'd work all day.

After a while I'd go to the banker again and say: "Mr. Banker, I've got so much ready money; I have so much stock; I owe so much. I want to go over to Omaha and buy some feeders; there's good money in it." And Mr. Banker would be glad to lend me the money to buy those cattle, too. He'd know I was paying my store bills, that my wife wasn't wasting money, that we were working and saving, and deserved to succeed. In ten years I'd have a good stake. That's how I'd start again.

Saved First $30,000 in Ten Years

Let me tell you one thing: the first ten years of our married life my wife and I worked hard, as hard as human beings ever worked. Corn was worth practically nothing. I have sold as good hogs as ever went to market for two cents a pound. We raised a large family. In ten years, with the low prevailing prices, we accumulated $30,000 over and above all our expenses. I could do it again too, and do it better still.

When you come right down to it, hard work and frugality are the only secrets of success. There is no other way under the sun. It doesn't matter what you are doing, hard work, connected with an ability to run your business, will succeed.

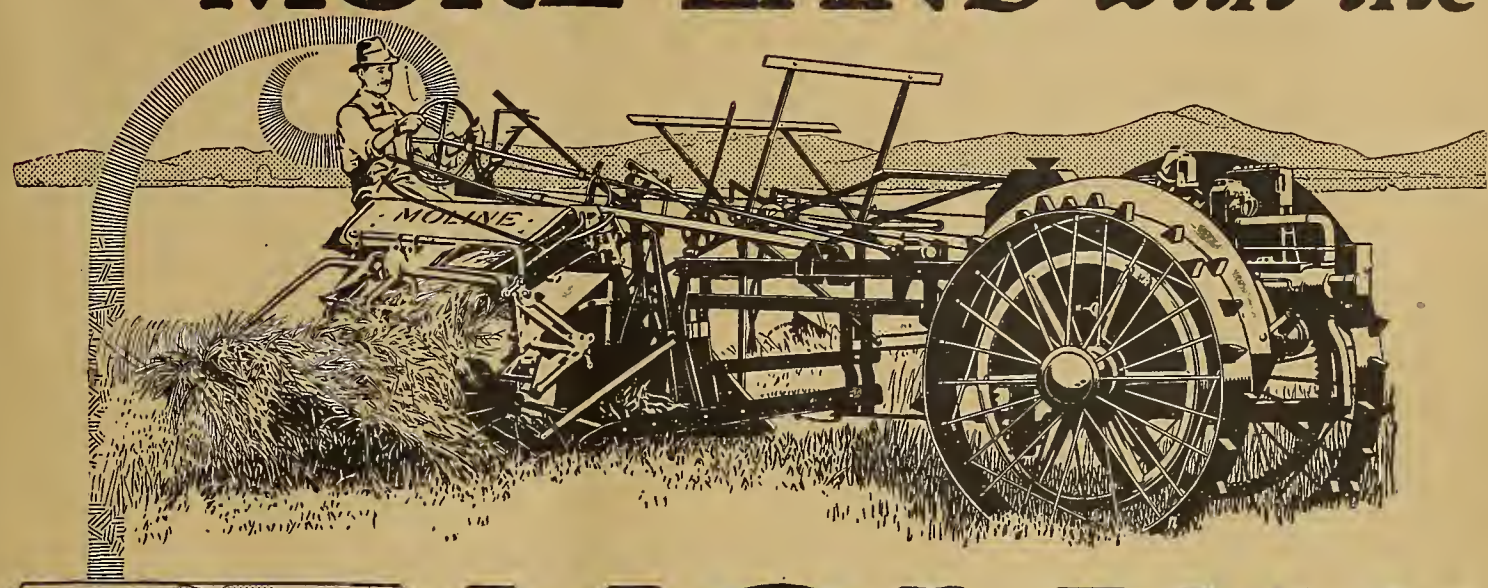
The average hired man of to-day is a conundrum to me. I can't understand him. Farm labor is the highest priced unskilled labor in the world. I figure that a man who is paid $50 a month on our place is getting $100, counting rent, fuel, chickens, and so on. Almost everything that he eats is raised on the place and costs him nothing. The average man in town earns $2.50 or $3 a day, and doesn't have work every day. He must pay for every bit of food he eats. How much better off, therefore, the farmhand is!

What we need is a revival of the good old-fashioned ideas that a man must work and save, that energy, ambition, and nerve are what make men rich, and nothing else. Work and save, work and save—that's the endless chain that takes you to success.

As I said in the beginning, I'm a man of strong convictions. I mean every word of what I have written. If I can bring any man around to the path that I have trod and send him onward to success, I shall be glad I told my story. Mrs. Hopley and I have reared a family of nine children, and have given them all a good education. For several years we have given them most of the money we have made, as well as a part of our fortune. A man my age doesn't need much, neither does my wife. We believe it is better to give the children money from time to time instead of waiting until we are gone.

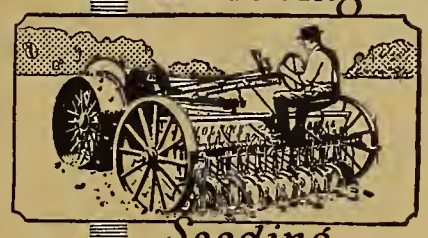
I am interested in all young folks. Take my advice, cut out the extravagances, work for yourself, put enthusiasm and energy into your work, study all you can, save the big portion of what you earn, then you will not have to envy the man who started as you did and passed you early in the race.

ONE MAN CAN FARM MORE LAND *with the*

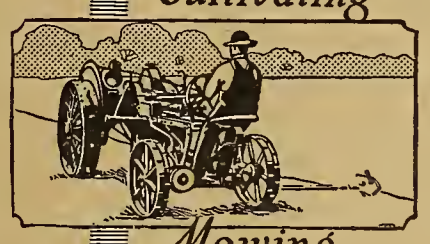


Plowing

Harrowing


Seeding

Cultivating


Mowing

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"It Solves the Farm Help Problem"

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One Man has power at his command equal to five horses, capable of doing the work of seven horses owing to its greater speed and endurance. This power is always available for any farm work.

One Man operates the Moline-Universal Tractor from the seat of the implement to which it is attached, where he must sit in order to do good work.

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All these one-man operations with the Moline-Universal are possible because it is mounted on two wheels, all its weight is traction weight; it is powerful—pulls two 14-inch bottoms easily—yet it is light so that it does not pack the soil. The Moline-Universal attaches direct to the implement, making one compact unit.

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Thousands of Moline-Universal Tractors are now at work under every conceivable condition in all parts of the United States and in Canada, England, France, Sweden, Norway, Denmark, Russia, Italy, Spain, Mexico, Peru, Argentine, Brazil, Cuba, Guatemala, South Africa, Australia. Wherever a Moline-Universal Tractor is sold there is immediately a big demand for more.

The demand for Moline-Universal Tractors has far exceeded our expectations. We built an enormous factory which is devoted entirely to making Moline-Universal Tractors and three times have erected large additions to cope with the enormous demand. We now have the largest tractor factory in the world.

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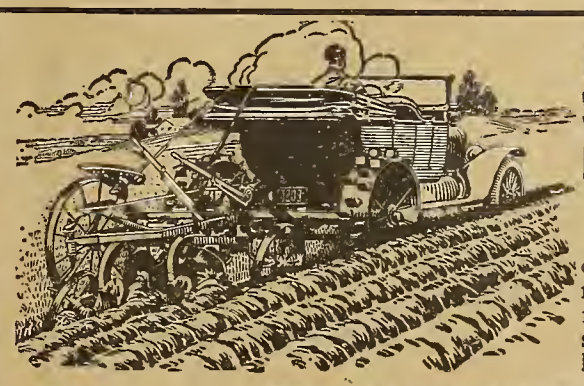

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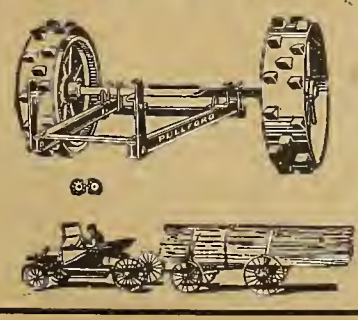

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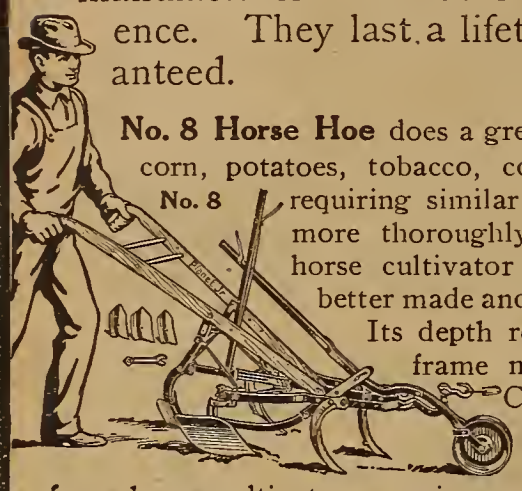

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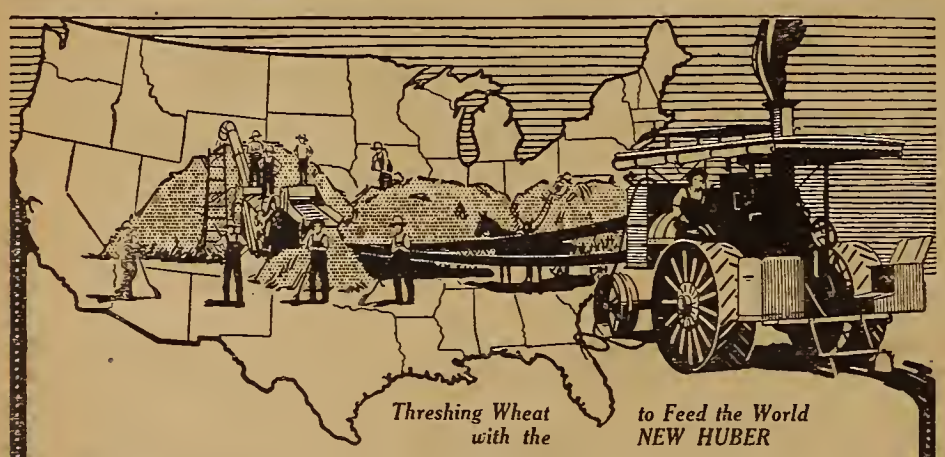

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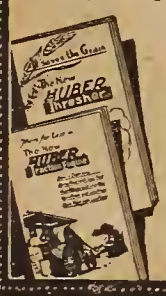

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THE HUBER MANUFACTURING CO., 407 Center St., Marion, Ohio

Plowing Cleared Land

By E. V. LAUGHLIN

OWING to the unusual amount of wood that has been cut during the past winter, a much larger acreage of new land than usual awaits plowing. While it is desirable that such land should have been freed of its stumps by grubbing or pulling, yet if this has not been done the land may be plowed and good crops raised. The purpose of this article is to describe the methods that render the plowing of such land a fairly easy task.

There is not a great deal of difference between land that has borne big trees and that which has been cleared of a heavy growth of small timber. In the first case the stumps are usually big and far apart; in the second case, small and close together.

The equipment for breaking new land studded with stumps is as follows: A strong team trained to pull steadily and together, or a tractor; a rather narrow plow, say a 12-inch, provided with a standing cutter; a sharp ax carried on the beam of the plow; a temper previously chastened for the tugs, pulls, blows, and bumps that invariably accompany the breaking of new land. The writer's own experience is that the first and last of these four items are vitally interwoven with the satisfactory breaking of virgin soil. Nothing is more annoying than using nervous, high-strung horses, for the frequent stops work them into a fretful attitude that invariably breaks down the driver's patience and humility; and unless the plowman has these two qualities in goodly quantity the plowing of stumpy land is usually accompanied by ethical deflections of a pronounced character.

New land should be plowed as soon as possible after the frost has left the ground, as at this time the soil is rather more porous and the roots unusually tender. Previous to this the surface should have been cleaned until entirely free from brush and sticks. If the land is rolling it should be mapped out in lands that as far as possible permit the furrows to be turned down-hill. Doing this greatly facilitates the ease with which the heavy sods may be turned over. In addition, it is much easier to lift the plow around stumps when the furrow is down-hill.

Lots of power is a prime essential in plowing cleared land

It's Easier to Plow Deep

It is easier to plow new land at a depth of six inches than at a depth of four inches, for at the former depth the nose of the plow passes under the network of surface roots and is less impeded.

After the first furrow is turned the plowman should make frequent use of the ax. It will be comparatively easy to cut away the protruding roots that are too big to be cut with the cutter. By exercising a little patience the lateral roots may be sliced away from the stumps so that little remains but the taproots. Stumps so pruned rot out in a very few years. Usually it will be necessary to cut a furrow through hazel and other clumps of shrubbery, but this is not a very tedious task.

Frequent filing of the cutter greatly facilitates the cutting of roots. Time spent in this way is time well spent. The same is true of the plowshare. Dull plow, cutter, and ax delay the plowing and render the whole process wearisome.

After a virgin field has been plowed it should be harrowed with an A-harrow and the roots and upheaved trash removed. Such land does not require much cultivation during the first year. It is wise, however, to cut down the sprouts two or three times during the season. A heavy stock hoe serves admirably for this purpose.

Emergency Machine Bearing

ONE day last summer I was very busy mowing, and anxious to get done all that I could. To my dismay I noticed that the mower seemed to pound, but I kept on. Finally it would not work at all, so I was forced to stop. I could not discover the cause of the trouble while looking it over in the field, so I hauled it to my workshop. I took it apart little by little, until I finally found that a bearing on the main shaft had worn through.

I first placed the shaft in position, then I took a short piece of clothesline and pressed it in around the shaft so as to hold it in place, pushing the clothesline in around the shaft just far enough to correspond to the length of the old shaft bearing that was broken. I used clothesline because it would have to be left there and, being soft, it would not wear on the shaft.

After getting the shaft in place as above described, I placed the gear that was on the shaft at the outer end of the bearing, also the washer, in its place. The shaft was in the same position as if ready to use, and held there by the clothesline, but without any bearing.

Over this bearing was an oil hole about one-half inch in diameter. I melted some babbit metal very hot and poured it in through the oil hole until it filled the space completely to the bottom of the hole. After it cooled I found that I had a bearing apparently as good as if I had sent for one.

On trying the shaft after making the bearing as described, I found that in certain places it bound.

So I took some powdered emery, sprinkled it down through the oil hole, moistened it with lubricating oil, and worked the shaft back and forth in the new bearing for a while until it moved easy. All this took about an hour's time. But before using I poured into the bearing through the oil hole a generous quantity of kerosene oil and worked the shaft by hand. I did this two or three times to be sure that there was no powdered emery left to wear the shaft.

All farms should carry babbit metal for similar emergencies, to use on tractors and other farm machines. Also, in my case I have found that powdered emery is useful.

The Booze Fighter

[CONTINUED FROM PAGE 9]

pitying sort of way that was harder to bear than her anger. "If you hadn't been drunk nobody could have roped you in that way."

"I wasn't drunk," I protested, trying to speak indignantly. "The horses looked all right. How was I to know they'd been doped?"

But there wasn't any truth in what I said, and I knew that she knew there wasn't. Like most Kentuckians, I knew horseflesh from A to Z, and I knew very well there was only one reason why I'd been stung on that deal: for an hour preceding the trade I'd been drinking whisky with the owner of the aged nags.

However, my wife didn't stop to argue that matter. She passed on to another one, more distressing than the first. The previous autumn I'd lost nearly four hundred dollars by selling my corn when I was drunk. As usual, I was hard pressed at the time for ready cash, and in a rash, impulsive moment, while my brain was inflamed with the fumes of alcohol, I had sold my entire crop for any price I could get.

Those were just two of the disastrous blunders that my wife reminded me of that night. There were lots of others, many of them no less costly, and all attributable to old King Booze.

I'd bought a lot of catchpenny rubbish I didn't need or want, because the agents happened to strike me when I was feeling mellow, and on another occasion I had hired two men to paint my barn, paid them half their wages in advance, and was finally compelled to do the job myself with the aid of my hired man. The painters never came back.

And so it went. A drunken man, or one half-drunk, is no more capable of successfully closing a business deal than a madman is able to run a locomotive.

My wife had kept careful tab on all the mistakes I'd made, and she paraded the whole lot before me before summing up her case. Then she said:

"Don't you see, dear, it doesn't pay? Viewing it solely from a money standpoint, it's a losing game. Neither of us can afford it. And that doesn't take into account the way it undermines your health and saps your vitality. Your loss in these can not be reckoned in dollars and cents."

So I Decide to Swear Off

She had plenty of other arguments too, such as the thousand-odd makeshifts and petty economies she'd been forced to endure, the need of sending our daughter to college pretty soon, the more immediate need for many repairs on the farm, and so forth.

I had the worst of the discussion from the start. Before she got through I was feeling pretty dazed, and I hadn't thought of one single thing to support my side. So, after we'd sat up half the night talking, I promised to swear off.

"Provided," I said, "I quit gradually—say, two or three drinks less each day, until I've finally stopped altogether." But she put her foot down hard on that.

"You've got to quit right off," she said, "and quit now. You managed to live thirty years without liquor; there's no earthly reason why you can't keep on living without it."

We talked it over some more, and at last I agreed never to touch another drop. By way of helping me to keep the agreement we drew up a set of household rules the first and most important of which was that she was to handle every cent of money that came from the farm; in short, I was to be given food, shelter, clothing, and other necessities, but never any money.

It was up to me, however, to win the fight—and I won it.

There was nothing spectacular about it. I didn't lock myself up in a room, and march back and forth before a bottle of whisky, shaking my fist at it in defiance—nothing like that. In the first place, I'd have had a hard time getting the whisky: as a cashier my wife was hard as stone.

No; I resolutely steeled my mind against the stuff. I refused to think of it. This wasn't easy, you may be sure; and nobody but myself will ever know the hell I went through the first few weeks. It was then I realized, as I never had before, what a strangle-hold booze can get on a man. There were times in those first few weeks when I'd have bartered my soul for a drink.

Black coffee, candy, and chewing gum helped me some, but in the end it was will-power that won. Whenever I felt that craving for whisky—and it would come on me at the most unexpected moments with overwhelming force—I would grit my teeth and tell myself that there are only two reasons why men drink: either because they're too weak to conquer their fondness for alcohol, or because they like to associate with men who like to drink.

The second reason didn't hit me, and if it had I'd have eliminated it by forming new associates; and as for the first, I never have admitted, and never will, that I'm a weakling. I also reminded myself that the most despicable drinker of all is the one who drinks alone. There's something especially contemptible about a secret vice. And I quit it once for all. And any other man, unless he be of the jellyfish type, can quit it the same as I did.

That was several years ago, and there have been a good many changes since. My daughter will be graduated from college in June, we have a fine new automobile,—it's the latest model and cost $2,800,—our house is modern in every way, we have two thousand dollars' worth of Liberty bonds, three thousand dollars' worth of bank stock, with a directorship in the bank, and our farm is one of the finest in Kentucky.

Keeping the Home Fires Burning

[CONTINUED FROM PAGE 7]

Trade had to be carried on. Who would run stores and retail goods? Who would man the factories and keep the industrial pot a-boiling? Essentially men's work this, but there were no men. Women stepped in and, after a little preliminary bucking, handled the lines of the industrial steed as though to the manner born.

Additional trade sprang up in a night. Munitions were wanted; workers in iron, in steel, in metals, of all sorts; workers among powders and explosives and acids. Essentially men's work, but there were no men. Men must fight, women must—yes, a new axiom—women must do men's work. Women slipped into overalls and took up a hammer. Women grasped the whirling teeth of unknown machinery with a delicate hand but a firm hold, and learned the secrets of the mechanic.

Agriculture became a crying need. We wanted food. Huge concourses of men, gathered closely together, wanted food. They wanted more food than ordinarily because of the greater strenuousness of their life. Munition workers of both sexes wanted more food than before to build up the greater expenditure of energy. Women answered the call of the fields and hurried to produce the national food supply.

In this work we have proved our equality to men. In this war we have proved that we still retain—no, rather that we have increased the respect with which our men-folk honor us.

There only remains, when victory is ours, to remodel the working world so that each may be treated in fairness. It only remains to eliminate the last black grains of petty jealousy and of hoary-headed theories as to men's or women's "place in the world." Our place in the world is the place we make and earn for ourselves.

"A nation is as great as its women." Think then of the development abroad in the countries of the Allies whose women are helping to win the war.

Lloyd-George has said, "Without women and women's work we could not win." That is a mighty tribute. A wonderful tribute it is to us also that few, if any, suffer from inflated ideas of their own importance, that few develop "swelled head." And few of us give way to the phrase, "I told you so."

We women of Britain know, after three years of war with a dastardly and treacherous foe, that we, men and women *together*, must win.

He Wrote To His Brother "Get a JOHN DEERE Tractor Plow"

"You ask me what I think about your buying a tractor.

"Judging by my own experience, I'll say that you have done the right thing. But I want to give you some good advice that a neighbor gave me when I decided on tractor farming. 'Remember,' he said, 'that the tractor only pulls. It's the plow that makes the seed-bed.'

"You ought to get the best plow you can buy to use with your tractor. That's just as important as buying the tractor itself.

"I bought a John Deere plow when I bought my tractor and I am mighty well pleased with the work it does. It is unusually strong and light running. It saves fuel, and fuel costs a good deal these days. It doesn't have any chains and sprockets to cause trouble. It is so easily operated and dependable that I can keep my attention on the tractor while plowing. And best of all, it leaves a perfect job of plowing behind it. The best advice I can give you in connection with your tractor is 'Get a John Deere Plow.'"

And that is the best advice anyone can give to a man who intends to buy, or already owns, a tractor—get a

JOHN DEERE TRACTOR PLOW

Successfully Used With Any Standard Tractor

Makes a Good Tractor Pay

A John Deere Tractor Plow repeats its first great value to you year after year. It continues to make better seed beds. Its use means repeated plow profits for you instead of repeated plow investments by you. Its seed bed-making service makes a good tractor pay.

Operating Economy

A John Deere Tractor Plow in your fields saves time, labor, fuel and plow up-keep. You operate it from the tractor seat. It requires little or no attention as you drive down the field. Its extra-quality bottoms scour perfectly. Its extra clearance prevents clogging. In turning at the end of the field, a slight pull on the trip rope causes the powerful power lift to raise the bottoms high and level.

Because of the location of the axles, the bottoms, when lowered, reach full depth instantly and stay in the ground. Perfect balance and superior bottom qualities made the plow extremely light draft—fuel-saving. There are no chains or sprockets to cause trouble. Every part is as strong as the best of material and workmanship can make it.

Use It With Any Standard Tractor

You can use a John Deere Tractor Plow successfully with any standard tractor. If your tractor is small, get the No. 5, carrying two to three bottoms. If your tractor is of the larger type, get the No. 6, carrying three or four bottoms. Insist on a No. 5 or No. 6—see them at your John Deere dealer's.

Get These Free Books

Write today for our free booklet describing both the No. 5 and No. 6 John Deere Tractor Plows. It has a message on tractor plow value that you will find profitable reading. Ask also for our big free book, "Better Farm Implements and How to Use Them." Its 156 pages describe a *full line* of labor-saving implements—tells how to adjust and operate many of them. It is full of practical information that will help you. Use it as a reference book. Worth dollars.

To get these books, indicate the farm implements in which you are interested and ask for package TP-28.

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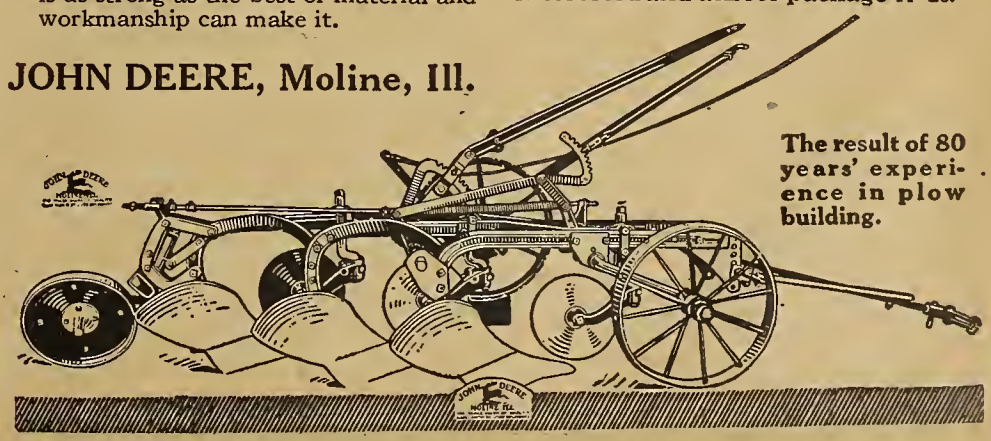
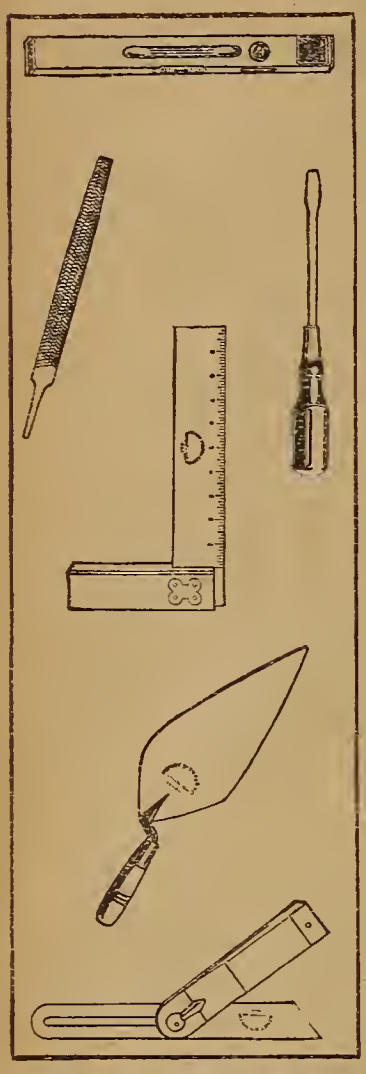


The result of 80 years' experience in plow building.



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Every one of these qualities is found in Disston cross-cut saws. They are made of Disston crucible steel by workmen who have 77 years of Disston traditions behind them. Disston experience has developed patterns of these saws adapted to every wood, every size of tree, every part of the world. One of these patterns is intended for the very work YOU want a saw to do.

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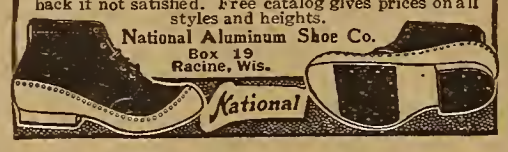

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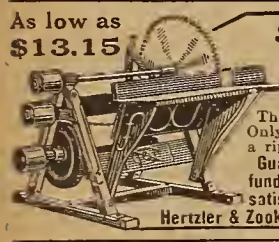

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Your Next Summer's Ice

By JOHN COLEMAN

IT IS not so many years ago when ice for farm use was considered nothing less than an extravagance. The banker, doctor, and lawyer were known to have ice the year around for their households, but on the farm where much winter leisure time was available ice was counted a luxury.

My experience has been that without ice during the hot months there is continued spoilage of table-food products, and if these are not damaged beyond consumption the quality of the foods consumed is lowered and the workers, from the least to the greatest, suffer in health and consequent efficiency, mental and physical.

It has been found that a small ice-house 10 or 12 feet square, with posts 9 or 10 feet high, can be built of cypress or other durable lumber with concrete foundation and painted two coats for not far from $100. As a matter of fact, there are many rough storage buildings for ice now in use, and which are proving satisfactory, that did not cost one half of this amount.

Successful ice storage depends on good underdrainage which will allow all drip from the ice above to be carried readily away and at the same time let no air currents reach the foundation on which the stored ice rests. There must be from 8 to 12 inches of good insulating material (sawdust or cut straw, preferably) under and on all sides and over the ice mass that has been stored.

When several neighbors work together, filling the icehouse is a short job

If the storage building cannot be placed in the shade furnished by trees or another building to protect the ice-house from the direct rays of the sun, a double-walled storage building will help to conserve the ice materially. Then there must be a free circulation of air above the insulation material to keep the surface from becoming damp, thus reducing the preserving effect of the covering over the ice.

How Much Ice is Needed?

From my own personal experience and from that of other families I have found that a generous supply of ice for an average home is from 5 to 10 tons, even when used liberally. This quantity will require storage space of only 8 to 10 square feet, making the ice stack 8 feet from the foundation up. However, if dairy products, fresh meats, fruits, and vegetables are to be kept cool in a large refrigerator or ice chamber, the ice-storage space should be increased to meet the requirements. For example, a building 12 feet square with 12-foot posts will furnish 200 pounds of ice daily for 300 days if it has been properly stored.

In one community I recently visited, where there was no stream near, I found in use a co-operatively owned neighborhood outfit in which ice cakes were frozen. The containers had a capacity of 12½ cubic feet, and each pan from one filling furnished six cakes 10x12x20 inches. The long galvanized iron pans used were divided into compartments, and the top was made slightly larger than the bottom to prevent bursting of the pans. If desired, the pans can be made just the size of the cake wanted.

When the weather is cold the pans containing the ice are turned over on a platform as soon as a frozen shell sufficiently thick to prevent breaking has been formed. On these pans a little hot water is then poured to loosen the ice, thus leaving the cakes on the platform.

The process is hastened by having an elevated tank into which the water is pumped in advance and allowed to chill; then when run into the pans freezing begins immediately.

In the case of one community ice-making outfit, I found upward of 100 containers in use. The pans were filled from a deep artesian well located centrally in the neighborhood co-operating. In cold weather two freezings were made in twenty-four hours.

It was found that some townspeople and farmers not having a financial interest in the ice-freezing outfit were always eager to pay a fair price for ice frozen from the artesian well water. This income furnished sufficient revenue more than to pay the upkeep and interest on the ice-making outfit.

The Key to Safe Storage

In almost any neighborhood there may be found a suitable area of land not adapted to profitable tillage or other use which can be made into a storage pond to receive water from a spring for ice-making purposes. If necessary, the water may be piped from a spring a considerable distance away, or an artesian well sunk as a source of supply.

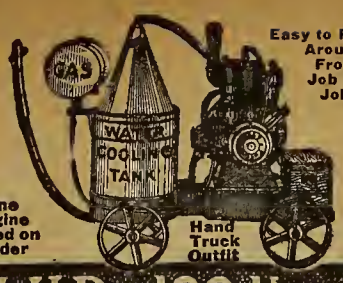
There is quite a knack in filling ice-houses to the best advantage. There should be 10 or 12 inches of solid sawdust or cut straw above the foundation of cinders or gravel, and the first tier of ice should be placed so as to be as level as possible. As each tier of ice is added, powdered ice worked into all cracks and crevices helps to exclude the air, and when the last tier is in place ice-cold water is poured on the ice stack until all the crevices are full; the mass then becomes practically a solid cake, which aids materially in keeping the ice. When removed the cakes come apart easily where they were held together with the powdered ice.

One plan for saving ice and lessening the labor of its storage was to build the house in the side of a bank similar to a bank cellar. These bank icehouses were walled up on three sides with rough stone, and plastered inside. The ice was unloaded through a roof trapdoor without any lifting from the bank above. The ice was taken out in one case directly into a dairy house that was also built into the same bank.

Another bank icehouse was supplemented with a cold-storage chamber accessible from an anteroom, the ice being stored around three sides and over the cold-storage chamber. This proved to be an ideal arrangement to hold all kinds of perishable products in fresh and perfect condition, wherever there was an overplus of small fruits, eggs, poultry, etc., to supply the regular customers and the local trade.

Still another labor-saving plan of ice supply is a co-operative icehouse which supplies a creamery and its patrons. The ice is harvested by the creamery patrons from a convenient pond, which was also co-operatively excavated and completed. The ice is distributed to the homes of the patrons by the milk and cream handling teams daily. This plan requires a large amount of harvested ice.

In conclusion I wish to say to all interested in permanent ice-storage buildings, do not fail to look into the merits of concrete blocks and vitrified tile as well as lumber for building material. These building materials have proved their worth not only for durability but for ice-keeping qualities as well, when the buildings are properly constructed. The icehouse when placed near the home buildings should be attractive rather than an eyesore, as is the case with a cheap, makeshift building.



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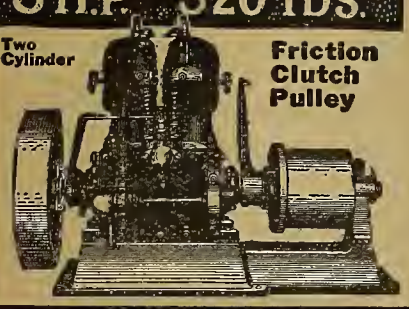

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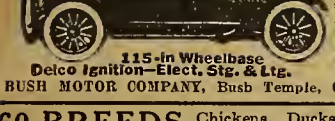

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Good-Health Talks

By David E. Spahr, M. D.

A PROSPEROUS farmer came into my office one day. He looked ill. His shoulders drooped, his eyes were dull, pessimism was written all over him. He told me his symptoms. Nothing particular, just general misery—indigestion, sleeplessness, a host of little aches and pains. His work had lost its punch and his life its charm. My prescription startled him. It was to take his wife and spend a week visiting her sister, who lived in Chicago. He scoffed at the idea at first, but finally said: "Well, Doc, I'll try it." He did try it, and came back looking the picture of health. The moral of this little story is that everyone needs a vacation occasionally—the man from his business, the woman from her house. A trip to an interesting place is one of the best tonics I know of.

When Baby Has the Croup

We live about ten miles from a doctor. My baby is now about five months old, and should she get the croup some time, what would be first-aid treatment? *Mrs. T. J. P., Kansas.*

THE safe, sane, and effectual remedy for croup is from one to three one-third grain tablets of calcium iodide in a teaspoonful of hot water every half-hour until relieved. Give less or more as indicated. Of course, the child's bowels should be looked after.

So I Can Reply Promptly

WHEN you write to me about your ailments, or those of your relatives or friends, please write on only one side of the paper, and make your descriptions of symptoms as brief as you can. If you wish a personal reply, kindly enclose a stamped envelope.

DR. SPAHR.

Antitoxin for Diphtheria

Is antitoxin necessary in cases of diphtheria? *Mrs. F. E. G., North Dakota.*

THE medical profession, as a rule, has accepted the fact that diphtheria antitoxin is a specific for that disease.

Earache

My little son, aged seven, is troubled greatly with earache. What can I use for this? *M. F., Wisconsin.*

THE simplest and best household remedy for earache, that is free from anodynes, is the following: Oil of cajuput, two drams; oil of sweet almonds, one ounce. Mix, and drop from two to five drops in the ear every hour, as required. Also apply hot, dry air. If an abscess is forming the doctor could puncture the drum membrane.

Sore Mouth

My mouth is very sore. I have little white ulcers on lips and on tongue. I suppose it is from chewing dandelion root. What can I use for a mouth wash? *R. D. L., Indiana.*

USE for a mouth wash one of the antiseptic and alkaline tablets to two ounces of water, a tablespoonful every two hours.

To Avoid Pitting

What can be done to prevent pitting after smallpox? *T. U. R., Tennessee.*

OLIVE oil, glycerin, and rose water; cold cream, oxide of zinc ointment, and flexible collodion, have all been recommended to exclude the air to prevent deep pitting. Probably the best way is to make a mask of heavy felt with openings for eyes, nose, and mouth, to be kept saturated with pure cold water and changed frequently, beginning as soon as the eruption appears and kept constantly applied until well.

How Will You Do Your Plowing?

Your problem is to raise more food. You will have less help and horse power to do this.

To raise more food despite shortage of man and horse power means you must adopt tractor power and plows of larger capacity that will do more and better plowing.

Our duty is to furnish you these plows and other power tillage implements.

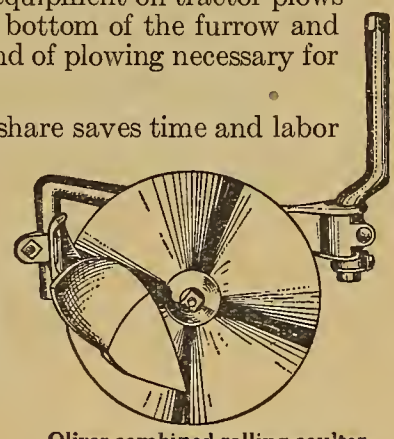
By team work we can both do our part in raising more food. This is vital to the winning of this war.

With an Oliver tractor plow and any standard light tractor you can plow your full acreage, preparing a better seed bed and thereby increase your yield.

Oliver combined rolling coulters and jointers furnished as regular equipment on tractor plows turn all trash on the bottom of the furrow and make possible the kind of plowing necessary for the best results.

Quick detachable share saves time and labor when making share changes.

Let us give you detail information on Oliver tractor plows and show you just why tractor power will prove a profitable investment for you.



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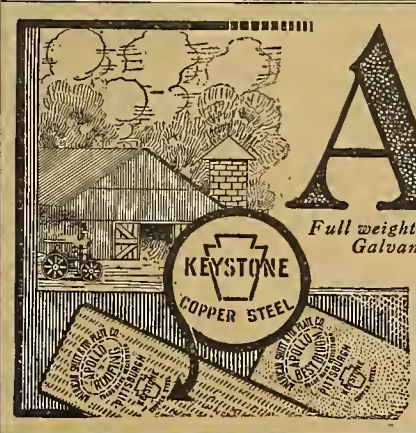

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AMERICAN SHEET AND TIN PLATE COMPANY, Pittsburgh, Pa.

Fighting Sky

Photograph by Brown Bros.

IT is only about ten years since the first motor-driven piece of fire machinery brought sorrow and misgiving to the boys who loved the fire horses. The firemen will tell you enthusiastically of the record time they made on the last call with the new apparatus, but the days they love to "yarn" about are those when the run was made behind the fastest horses in town.

Photograph by Brown Bros.

MANY a romance has started when a fireman rescued a fair lady from the sixth-story window and carried her down a ladder like this. And many a man who has never seen the department do anything more strenuous than play pinochle in the engine-room changes his mind about them after there has been a serious fire in his own home.

Photograph by Brown Bros.

THE material of the surrounding roofs makes a big difference in the spread of a city fire. Many cities have roofing zones in which all roofs must be of fire-proof material—concrete, metal, tin, asphalt, or gravel. This system protects the high value business district against the menace of wood-shingle conflagrations. It practically amounts to vaccinating the city against million-dollar fires.

Copyright by Underwood & Underwood, N. Y.

THE ladder can be turned any way you please, and used either for rescue work or for directing a stream of water on to the roof of the threatened building. The New York department has demonstrated that they can drench the top of the Woolworth Building, highest in the world.

Photograph by Brown Bros.

DURING the first seven months of 1917 the United States lost $150,125,150 by fire, an increase of $18,000,000 over the same period in 1916. In New York alone, in 1916, there were 1,306 fires, totaling a loss of $559,416, caused by carelessness with cigar and cigarette stubs; in fact, fire risk is one of the main arguments of the anti-tobacco debaters. One of the most costly fires of the year occurred in Atlanta, Georgia, in May, when $5,500,000 worth of property was lost.

THE most dread fires occur in factory districts, like the one in this picture, where women and girls are crowded into rooms filled with machinery, and where the buildings are often old-fashioned and unsafe. Every once in a while a terrible fire like that in the Troy shirt-waist factory a few years ago sets a country to tightening up its fire laws.

Photograph by Brown Bros.

scraper Fires

Photograph by Brown Bros.

THE right half of this picture looks more like a photograph of American Falls in February than a view of a fire in a great office building. In a time like this the fireman has two choices—to be frozen or to be scorched. Usually he has only the one. Between fires he leads a care-free life, the only requirement being that he keep "fit." To become a fireman you must be between twenty and thirty-five, and must be able to pass a fair mental and a fine physical examination. Then you are on probation for three months, and if you show no signs of being "yellow" in the face of flame, smoke, or sagging roofs, you are on "for keeps."

Photograph by Brown Bros.

"THE loss was completely covered by insurance," say the newspapers when they publish a picture of the ruins the flames have left. Really a fire loss is never "covered"—it is simply transferred from the one owner to the many policy holders. If your wheat burns you can't eat insurance, and neither can our army in France.

THE union day of firemen is twenty-four hours. They go to bed at nine o'clock and get up at six. They have only one day a week off, and cannot leave the station without permission. Here they are rescuing men and women from the fifth and sixth stories. How do they do it so handily? They have ladder practice every day.

Photograph by Brown Bros.

Photograph by Brown Bros.

IT resembles a periscope, but it is merely a modern fire hose designed to meet the demands of high buildings. A heavy, steady volume of water is absolutely necessary in fighting fire. A small stream merely makes steam, increasing the heat and making the fireman's work more difficult.

WE asked if girls might be expected to take the place of firemen called to war service. "No," was the emphatic reply. "In responding to a night alarm, firemen have to be dressed and ready in half a minute. It would take the girls that long to remove their curl papers."

Photograph by Brown Bros.

Pluck, brains, and chickens save Jennie Mason from having to take in washing. Read her story

At the Home of the White Hen

Pure-Bred Poultry Help a Mother-Daughter Firm Win Independence

By JOHN FRANCIS CASE

A WOMAN stood waiting on the platform as the train pulled in. Trim, alert, and comely, I at once decided that she was the poultry club secretary with whom I had been corresponding.

And then we were shaking hands while Mrs. Mason was exclaiming, "Why, if it isn't our John Case! Don't you remember little Jennie Brown, John?—little Jennie who put the toad on teacher's desk?"

In a flash of memory I glimpsed a demure maiden with flaxen pigtails sitting in cherubic attitude while teacher cleared her desk. Then there was a scream and the teacher shrank back, while a timid toad went hopping across the floor. What howls of glee arose!

"Jennie Brown did it," piped up owl-eyed little Sam Frisbie, and wrath descended swift and sure. Brave little Jennie Brown! No boy could approach her in deeds of daring; she was the "Tomboy Taylor" of our school. And now after more than twenty years I was shaking hands with her again.

"You see, we were renters, John," said Jennie as we rode to her farm, "and two years in one neighborhood was about the limit for dad. He never was contented, but somehow back in the old Locust Grove neighborhood always seemed most like home. That's why I called you 'our' John, for I recognized you at once. We just kept moving until fourteen years ago we settled near the little town of Payne. I was seventeen then, and a year later Tom Mason and I were married. Tom was the town blacksmith and we had a cozy little home. Those were happy days."

The mile had been quickly covered, and we turned in at a vine-clad cottage home. Glistening white, the house and every outbuilding appeared spick and span. It was early spring and chicks were peeping everywhere. White they were too, and the entire farm effect was a symphony of virgin color. Then a sturdy girl and smaller boy came hurrying up to be introduced as Mildred and Theodore. There was no mistaking the pride in their mother's eyes as we resumed our interrupted talk.

"I wish you might have known Tom," continued Mrs. Mason, and tender memories caused a momentary pause. "We had purchased our little home and all was going well when, without warning, illness came. Tom died in the hospital after an appendicitis operation, and the shock left me dazed and numb. Mildred was six and Ted was just a baby then. The fraternal life insurance was promptly paid, but accumulated expense cut our combined resources to less than $1,000 in all. The outlook was gloomy.

"You know what prospect there is for a 'widow woman' in a country town, John," my friend went on. "Take in washing or get married again, that's the usual thing. I did take in washing for a while, for I was strong and eager to pay my way. But when old Jacob Grimes, who had just buried his second wife because of overwork at the farm, approached me after church one night and with a leer offered to 'see me home,' I recounted his family history in a few well-chosen words."

Little Ted directed a surreptitious wink at me and grinned because of his mother's flashing eyes. I surmised that there had been later similar episodes.

"The folks all said I was insane when I rented old Anthony Bales's place a mile from town," reminisced Jennie, "for the farm was a wilderness of weeds. But I'd always been a farm girl and I knew that hens paid well. The little home was sold, and with a few hundred dollars in cash, representing all we had in the world, Mildred and Ted and I moved out. I purchased a cow, a horse and wagon, a few implements, and a hundred hens.

"When the 10 acres of ground had been placed in cultivation that spring we had little ready cash. The outlook was not cheerful, and when drought cut yield of crop and garden, friends began insisting that 'I told you so.' But the hens stayed on the job. Variegated in comb and color, representing numerous different breeds, they paid the grocery bill, and I had some cash to spare.

"At the second year's beginning I was $50 ahead and the rent was paid. That wasn't so bad, after all.

"Somehow, though," she continued, "that flock of mongrel hens failed to please. I'd always been partial to white birds, so I determined to get some pure-bred fowls. 'More high-falutin' notions,' gossiped the neighbors when my first pen of Single-Comb White Leghorns came to hand. And it did seem high-falutin', for I'd paid $5 apiece for those five fowls. It represented half the profits from my first year's work.

"The birds were penned and we began saving eggs. It's remarkable how many chicks may be reared from a small mating when you give them every care. When we came to take stock that fall I found that we had 120 pullets and 40 cockerels in our pure-bred flock. True, some of them were late and small, but they all showed breeding and I was mighty proud.

"Strange, though, the cockerels, not the pullets, gave us the first insight into the possibilities of profit from pure-bred stock. They were so pretty and vigorous that I decided it would be a shame to market them, and I inserted a three-line advertisement in a farm paper, placing a value of $1 each on the pure-bred birds. That one insertion sold every cockerel on the place; a dealer snapped up twenty and another man took five. Five dollars paid for the advertising and cost of shipment. The male birds had paid first cost for the pure-breds, $10 additional, and I had the pullets left. Then we culled the pullets to an even hundred and sold the mongrel flock. And that brought us to the beginning of our third year's work.

"Mildred was my little partner," observed Mrs. Mason as she stooped to pet a fluffy chick

"'LITTLE partner,' I began calling Mildred," observed Mrs. Mason, as she stooped to pet a fluffy chick, "for at eight my daughter was my 'right-hand man.' We penned the most vigorous pullets in two yards holding ten females each, and purchased pure-bred males. Then we had a farm flock of 80 hustling hens. I placed advertisements in poultry papers and farm papers and, much to the amazement of the neighbors, began shipping eggs out by the bushel basket. And orders for eggs for the special matings came in as well. We were selling the range flock eggs for $5 a hundred and the pen matings at $2 for 15. My sales ran up to more than two hundred dollars. We bought another horse, gave the house and outbuildings a coat of paint at our own expense, and really began to enjoy life again. When I balanced the books at the end of that third year they showed a profit of $500 clear. And the white hens were working overtime.

"It is the baby-chick business, though, that has been the big winner for us," Mrs. Mason told me, casting appreciative eyes over her active flock. "I was timid about shipping chicks, for I feared that the poor little things would suffer, so I decided to order a few myself. Coming more than a hundred miles by express, they reached me strong and active, eager to get out and scratch. That decided me. I bought more incubators and a brooder stove, and changed my advertisements to read, 'Baby Chicks at the White Hen Farm.' We shipped 10,000 chicks that fourth year, and the big brooder took care of the others that were hatched. These chicks brought us from 10 to 20 cents each, and the profit was much greater than in selling eggs.

"With the sale of surplus stock our year's income was more than $1,200, and I bought the farm. Paying $100 an acre seemed unreasonable, for the improvements were of little value and the soil was thin and poor. But the place had become home to us, and gradually we were restoring fertility through crop rotation and fertilization.

"FROM the beginning I found that our trade name, 'The Home of the White Hen,' attracted inquiries, and once you receive inquiries it isn't difficult to make sales. So I began to figure how we could further arouse curiosity and make our advertising different from the rest. Ever hear of an '& Daughter' partnership? I never had, but I couldn't understand why mother and daughter couldn't constitute a firm as well as father and son. Mildred had become a real partner. She was keeping the books, helping with the incubators, and selecting breeding stock for shipment like a veteran poultry woman every week. So the firm became Mason & Daughter that fifth year. I played up the name, and inquiries poured into our mail box every day.

"Step into this laying house and take a look at our method of trap-nest record-keeping," was the next request. On the white-washed wall I saw a neatly kept record giving band numbers of the penned hens and the number of eggs produced by every fowl. But what interested me most was the printing on that card. Attractively displayed, here is what it said: "Jennie Mason, Mildred Mason. Mason & Daughter. Single-Comb White Leghorns and White Wyandottes. At the Home of the White Hen."

"One of these days it's going to be Mason & Company, for Ted is eager to join the firm," and Mrs. Mason smiled down at her dark-eyed son.

"You would hardly believe that we cleared $2,000 last season," declared Mrs. Mason, as we retraced our steps toward the house, "but it is true. It doesn't take many sales of birds at from $5 to $25 each to swell the profits, and we make sales up to the maximum sum. Mildred fancied the Wyandottes, so we added a selected few. They made good from the beginning, but I still feel the most affection for our hustling smaller hens.

"I bought the car and added the trailer for delivery service. It's an easy matter now to hurry in to town with a load of chicks for shipment and to take the children along to school. And all of us enjoy the ride."

In the dining-room Lina was placing dishes upon the table. Fragrant odors came from the kitchen and Ted sniffed with an appreciative nose. Throughout the house there was every evidence of comfort; it was a real home.

"How many hens are you keeping, Jennie?" I inquired.

"We had about 300 last year," was the answer. "Most of them, of course, in the range flock. The big bulk of our orders comes for baby chicks at 10 cents each. We have sold new hatched chicks at $1 each, and of late a growing number of orders from special matings at $5 for 10 chicks."

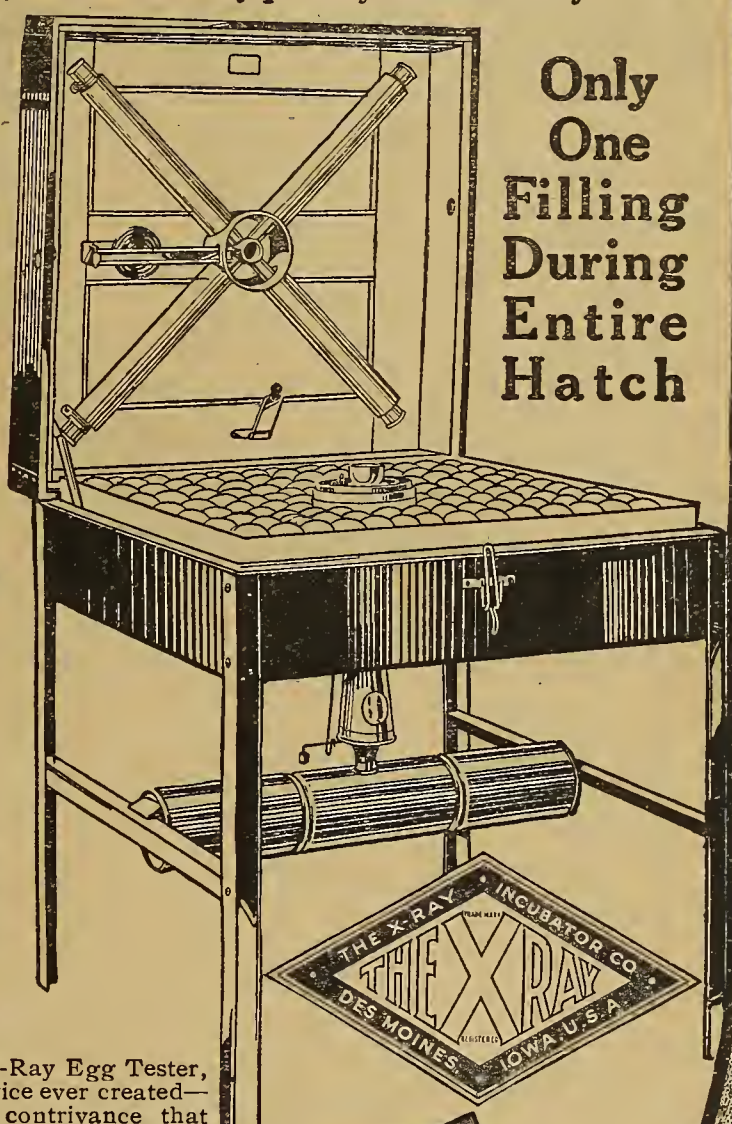
As we gathered around the family table, Jennie Mason made this apparently irrelevant remark: "I saw Myra Grimes down at the store to-day. Myra is old Jacob's third wife, you know, and she was a widow with three children when they married five years back. She was trying to induce Jacob to buy a new dress for her little girl, but he growled that 'times are hard and we must wait a while.' And poor Myra looks fifty if she does a day."

Act Quick! Get Your Share Of This $600,000,000.00 In 1918!

Princeton, Ill., April 14th
I thank you for PROMPTNESS. You are to be commended for QUICK WORK. I gave my order to Rural Carrier six miles from town on Wednesday. Was much surprised to receive a message Friday at four o'clock saying my X-Ray was at the Station.
MADGE JENKINS, Route 6.

ONE Hundred Million more pounds of poultry than last year! An untold number of Billions More Eggs! In all, $600,000,000 (Six Hundred Million Dollars') worth of poultry and eggs more than was produced in all 1917!

That's what is NEEDED! That is what the entire United States and all Europe is ready, *willing*, EAGER to pay top prices for. The U. S. Food Bureau and Dept. of Agriculture asks every farmer—every poultry raiser—every home owner to double—treble—quadruple their poultry flocks. To do this is patriotism. To do this will be *highly profitable*.



Only One Filling During Entire Hatch

Poultry and egg prices won't—*can't* come down. The demand is far greater than the supply. Chickens are easily raised the X-Ray Way. The waste stuff from kitchen or garden makes excellent chicken rations. Poultry will do well, grow well and lay well on rations consisting of 75 per cent green feed (such as turnip and beet tops, cabbage leaves, old lettuce and cull potatoes), and the balance cracked corn or other grain products. And—if you get the right start—an *early* start—you can get your share of this *extra* $600,000,000 poultry money. Get a

1918 X-Ray Incubator

Shipped Express Prepaid by Us to Practically All Points

This is the famous one-gallon oil—one filling during hatch incubator. Fill the big oil tank of the X-Ray Incubator—light the lamp—in fifteen minutes the temperature in hatching chamber is exactly right—other incubators require four to five hours. The lamp's flame is scientifically adjusted by the X-Ray Automatic Trip. The flame is automatically decreased or increased as needed. No wasted heat, no "cooked" eggs—none chilled.

Combines 20 Hatch-Increasing Improvements

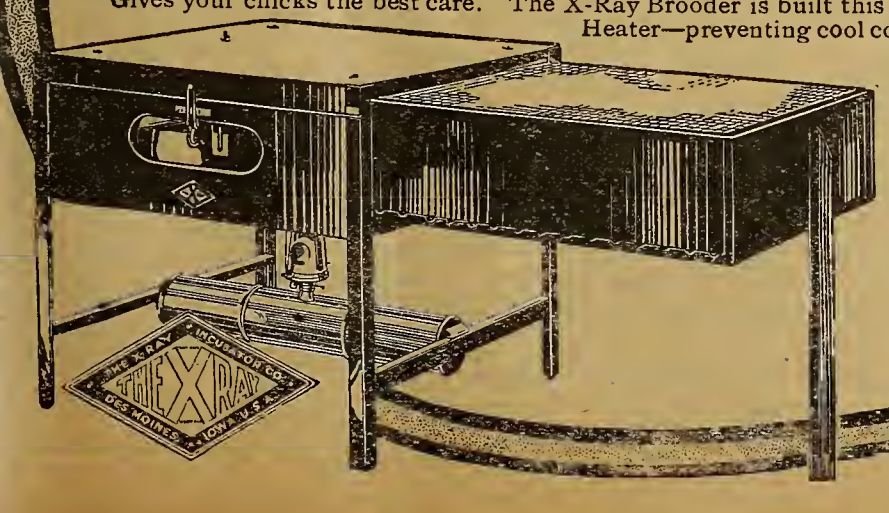
The 1918 X-Ray Incubator has X-Ray Handy Height Feature, with deeper lid that conserves the heat and saves oil—X-Ray Quick Cooling Egg Tray, built of heavy galvanized wire mesh—X-Ray Nursery Tray that gives better footing for the chicks, provides ideal sanitary conditions, makes a perfect "drying-out" place for new-born chicks—X-Ray Egg Tester, the simplest, surest fertility test device ever created—X-Ray Gas Arrestor, the simple contrivance that absolutely prevents entrance of fumes into egg chamber. Investigate this 1918 X-Ray before you invest a penny in any incubator.

Post Yourself! Send the Coupon Today for FREE BOOK!

A handsome, helpful volume—filled from cover to cover with vital poultry-raising facts—*truths* that point out the path you can follow to bigger hatches, sturdier chicks, *sure* poultry success. You absolutely *need* to read this book. It will post you—protect you against making mistakes in buying a hatcher. Send your name and address today. Ask for 1918 Book No. 52B.

The Great Chick Saver—The 1918 X-RAY BROODER

Gives your chicks the best care. The X-Ray Brooder is built this year with the famous X-Ray Duplex Heater—preventing cool corners and thus preventing the chicks crowding together and injuring themselves. Equipped with X-Ray Gas Arrestor, avoiding possibility of fumes entering chick chamber and affecting chicks' health. Canopy top over exercising room to protect chicks from draughts and excessive sunlight. Read the 1918 Book and learn *all* about this Brooder.



X-RAY INCUBATOR COMPANY
Department 52B
Des Moines, Iowa

X-Ray Incubator Company, Dept. 52B, Des Moines, Iowa
Send me *at once* Free Copy of your 1918 X-Ray Book No. 52B.

Name_____
Street or R. R. No._____
City_____
State_____

YOU TAKE NO RISK IN BUYING AN Ironclad THE IRON COVERED INCUBATOR

We Give You 30 Days' Trial
10-Year Guarantee

Why take chances with untried machines when for only **$12.50** we guarantee to deliver safely, all freight charges paid (East of Rockies), **BOTH** of these big, reliable machines fully equipped, set up, ready for use. Why not own an Ironclad outfit? Order direct from this advertisement and we will gladly give your

Both for $12.50 freight Paid East of Rockies

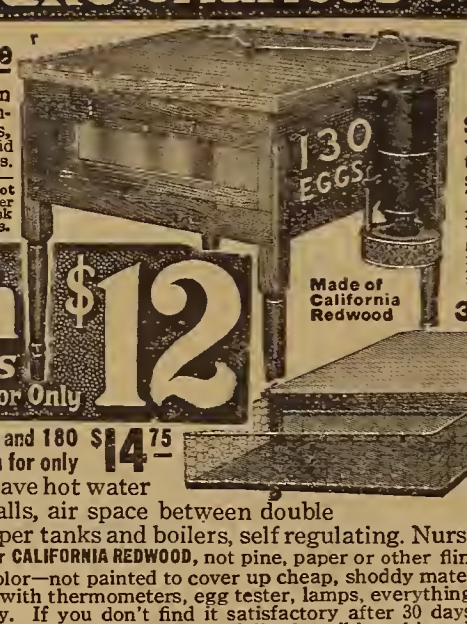
Money Back If Not Satisfied

Ironclads are not covered with cheap, thin metal and painted like some do, to cover up poor quality of material. Ironclads are shipped in the natural color—you can see exactly what you are getting. Don't class this galvanized iron covered, dependable hatcher with cheaply constructed machines—and don't buy any incubator until you know what it is made of. Note these Ironclad specifications: Genuine California Redwood, triple walls, asbestos lining, galvanized iron covering, galvanized iron legs, large egg tray, extra deep chick nursery, hot water top heat, **COPPER** tanks and boilers, self-regulator, Tycos thermometer, glass in door, set up ready for use, and many other special advantages fully explained in FREE Catalog. Write TODAY or order direct from this advertisement.

Write for Free Catalog Today.

IRONCLAD INCUBATOR COMPANY, Box 91 Racine, Wis.

Why Take Chances? Find Out What An Incubator Is Made of Before You Buy



Why Pay More

For only $12 you can get these two unbeatable machines, delivered, freight paid east of the Rockies. You take no risk—money back if not satisfied. You can order direct from this ad. Ask the publisher about us.

Both Machines $12 Freight Paid For Only

Send for our Free Catalog and we will send you a sample of the material used in Wisconsin Incubators and Brooders. Then you will know which machines are built best, which will last longest and which will give you the most value for your money. One good hatch will pay for a Wisconsin outfit and more. Why take chances? We give you

30 Days' FREE Trial

MONEY BACK IF NOT SATISFIED

10-YEAR GUARANTEE

180 Egg Incubator and 180 Chick Brooder both for only $14.75

Wisconsins have hot water heat, double walls, air space between double glass doors, copper tanks and boilers, self regulating. Nursery under egg tray. Made of finest, select, clear **CALIFORNIA REDWOOD**, not pine, paper or other flimsy material. Incubator finished in natural color—not painted to cover up cheap, shoddy material. Incubator and Brooder shipped complete with thermometers, egg tester, lamps, everything but the oil. This is the best outfit you can buy. If you don't find it satisfactory after 30 days' trial, send it back. Don't buy until you get our new 1918 catalog, fully describing this prize winning outfit. WRITE FOR IT TODAY. You can't make a mistake in buying a Wisconsin. On the market 15 years.

WISCONSIN INCUBATOR COMPANY, Box 68 Racine, Wis.

62 BREEDS, Pure-bred Chickens, Ducks, Geese, Turkeys. Hardy northern raised, vigorous, beautiful. Fowls, eggs, incubators, at low prices. America's Pioneer Poultry Farm; 24 years exp. Large fine Annual Poultry Book and Catalog FREE.
F. A. NEUBERT, Box 614 Mankato, Minn.

POULTRY PAPER Up-to-date: tells all you want to know about care and management of poultry for pleasure or profit. 50 cents per year, four months for 10 cents.
POULTRY ADVOCATE, Dept. 90, Syracuse, N. Y.

Raise Poultry—Help Win the War

Every backyard should have chickens now. Requires small outlay. Big profits if conducted properly. These booklets tell how to get best results: "LEE'S POULTRY BOOK," "SECRETS OF SUCCESS WITH CHICKENS," "CARE OF BABY CHICKS," "ALL ABOUT EGGS," "POINTERS FOR SUMMER AND FALL." Send today for these poultry helps, free for 5c stamps to cover mailing.
GEO. H. LEE CO. 212 LEE BUILDING OMAHA, NEBRASKA

Money in Poultry and Squabs Small Investment, Big profits. Our stock pays best. Thousands of prizes at big shows, best layers, lowest prices, all varieties. Big Free Book tells all about it. Write today.
CRESCENT POULTRY FARM, Box 31, Des Moines, Ia.

$200 to $300 Extra Money Easy
Find Out How—Send No Money—Write Today

The poultry business is now more profitable than ever. Over $700,000,000 was paid Farmers, Farmers' Wives and Poultrymen last year for eggs and poultry. A bigger business this year. War has boomed the poultry business tremendously. An excessive demand for chickens—a short supply. It's a patriotic duty to help fill it. Prices for poultry and eggs are soaring too. Get in a big, sure paying business like this, **now.** Don't experiment. Get in right. Sure Hatch Incubators have made big, sure money for people for 20 years. Over 300,000 well pleased owners. **Sure Hatch** is safe, so simple a child can operate it. Lasts for years. Hatches strong, sturdy, healthy chicks. Often pays for itself 10 times over the first year. We have the proof.

ALL EXTRAS INCLUDED

FREIGHT PAID ANYWHERE

SURE HATCH

The Big Profit Book Free

Get Poultry Feed Cheap—Learn How

Get Our Big Money Making Book FREE!

Our big catalogue has many illustrations, many letters from people who have made money with **Sure Hatch**—women as well as men. Tells how to prepare and secure cheap poultry feed. It's Free. Get it. It's an authority on poultry raising. Many money-making ideas. Every Farmer, Farmer's Wife, and Poultryman should have this book. Just a postal brings it to you—Free! Also ask about the **Sure Hatch Fresh Air Colony Brooder.** Self-feeding, self-regulating, simple, safe, enduring. Operating cost less than 6 cents a day guaranteed. It raises Sure Hatch chicks surely. Write today sure. Help your country win the war and make money too.

SURE HATCH INCUBATOR CO., Box 66 FREMONT, NEBR.

A One-Man Egg Business

By B. F. W. Thorpe

"WHAT income can a one-man flock of hens be made to produce when kept exclusively for eggs?" This is a question asked again and again. The answer must be: "Much depends on both the man and the hen, for there are men and men and hens and hens." Nevertheless, there has been some new and authoritative light recently thrown on this one-man poultry business proposition.

Last year Mr. S. Gobble was employed by the poultry experiment station at Mountain Grove, Missouri, to do the entire job of caring for 348 hens which were kept in 58 small separate houses (six hens to each pen) on a five-acre tract of land, each house being connected with a small yard. These hens consisted of 22 breeds and varieties which had been entered in the Sixth Egg-Laying Contest conducted by the station above named.

It is obvious that if one man can care for 350 hens, as Mr. Gobble did, unaided, when they were housed in over half a hundred small buildings, he could much easier similarly care for several thousand hens (if not trap-nested) were they housed in a half-dozen buildings adequate for their accommodation.

In caring for the 58 contest pens of hens, Mr. Gobble made use of such labor-saving mechanical aids as could be used to advantage under the conditions as they existed. But it must be remembered that he also had the extremely exacting work of trap-nesting and keeping perfect and constant account of every egg laid by the 348 hens during each day of the entire year.

As his rounds are made, Mr. Gobble observes the condition of each hen

Mr. Gobble began to care for these 348 hens November 1, 1916. His year in charge of them ended October 31, 1917. During that time, 58,860 eggs were laid, or an average of 169 eggs per hen. The average price received for the eggs sold was 33.7 cents per dozen. The highest monthly price average was 40 cents per dozen, secured in February and October. The lowest monthly price average was 27 cents per dozen, in March.

The total receipts for the year for eggs from the 348 hens was $1,653.58, equivalent to an average of $4.75 gross per hen.

The total expenses for scratch grain, mash feed, grit, lime, all kinds of green feed, litter, egg cases, egg-packing material, marketing eggs, disinfectants, lice-killing preparations, etc., was $916.89, which left a balance of $736.69 income from the eggs laid by the 348 hens, above all expenses, or $2.12 net per hen for the year.

All feed consumed by the hens was bought from retail feed dealers and on the open market, except green feed grown in the yards; and all sales of eggs were made on the market to commission men.

It goes without saying that Mr. Gobble was a superlatively busy man throughout every day of the year while caring for the hens in this contest. But had the same hens been kept altogether as a farm flock in one large poultry house, and had been trap-nested during only the fall and winter months, half of his time or more could have been devoted to other purposes.

Are there not FARM AND FIRESIDE readers keeping 350 layers who can make an equally good financial showing from eggs sold alone, when the record for 1918 is completed?

Stop Hatching Weak Chicks

With Cheap Incubators

Remember it is not how many you hatch that counts, but how many you raise. Chicks that hatch out weak and wobbly, and live but a few days, mean nothing to you except trouble and loss.

Sizes 60-egg to 2000-egg Prices $10.50 up

Queen Incubators
Hatch Chicks that Live and Grow

Built of genuine redwood—with double walls all around. Redwood does not absorb the odor from the hatching chicks. Cheaper woods, and pasteboard lining in iron and tin machines, retain the odors, to weaken and kill the hatching chicks. A Queen costs but little more, and the extra chicks that hatch and live soon pay the difference. CATALOG FREE.
QUEEN INCUBATOR CO. Lincoln, Nebraska

PEARL GRIT THROW PEARL TO POULTRY AND WATCH RESULTS T.O.M.Co.

Every Hen an Egg Factory

They can't help laying when they get PEARL GRIT with their feed. It begins to work in the crop, "chews" the food in the gizzard, adds sulphur and carbohydrates for eggs, lime for shells and silicon for feathers. *Free Booklet. Tells how to feed for egg production. Write today.*

The Ohio Marble Co. 83 Cleveland St. Piqua, Ohio

"THE DOUBLE PURPOSE GRIT"

MANKATO INCUBATOR EXPRESS PREPAID

6 Big New Features

on this famous time-tested hatcher made by Experts of 28 years' experience. Large Oil Tank, one filling to hatch. Double Walls, Redwood Case, New End Regulator, Clear Table Top, Double Heating System, Hot Water and Hot Air, Copper Tank. New Ventilating System, a chick life-saver. Shipped quick by EXPRESS PREPAID. Find out—get our book. Learn about this big Profit-Maker before you buy any incubator.

Mankato Incubator Co. Box 722 Mankato, Minn.

Feeding For Eggs--FREE This Book tells HOW to feed

Whether you keep ten hens or 1000, you cannot afford to feed **High Priced Feed** unless they lay regularly. A food that has material for **100** yolks and only **25** whites will mean the hen can lay but **25** eggs on that feed. This Booklet GIVEN FREE with a six months' trial subscription to **Poultry Keeper** for **25 Cents.** Address
POULTRY KEEPER, Dept. 37 QUINCY, ILLINOIS

These Girls Used **GEM Hatcheries & Brooders** costing only 40c. each, and raised 1,566 chicks in 1917. Hundreds more did as well. Catalog Free. Address,
F. GRUNDY, U. S. Expert, MORRISONVILLE, ILLS.

HATCH MORE EARLY CHICKS with Cycle Hatchers. Less trouble, less expense. Simple, dependable. Hatch big, strong chicks, easy to raise. 50-egg Hatcher only $7. Send postal for catalogue tells why these hatchers are best for you and gives many new ideas about poultry.
Cycle Hatcher Co., 3 Lake St., Elmira, N. Y.

FREE Startling BOOK About This New Kind of Hatcher

Just send in your name. Read about 16 wonderful new improvements in Radio-Round incubators. Built *round*—like hen's nest—*no cold corners.* Only one gallon of oil to hatch. Amazing economy secured by powerful triple heater, long upright draft, patented heat diffuser, *complete circuit* radiators. Heat regulation secured by cutting down flame at burner *automatically.*

RADIO-ROUND

has simple Vaporizing Moisture Attachment built in, keeps heat moist, mild, even. Big oil tank needs filling only once to a hatch. Double glass in *hinged top* means daylight egg chamber, and only 5 seconds to turn eggs. No lifting of heavy tray. 3 minutes a day is all the Radio-Round requires.

MAIL POSTAL NOW

Know all about the Radio-Round before you buy any batcher at any price. Shipped promptly to you, direct from factory, express prepaid. Three sizes. Brooders too. Mail postal right NOW for beautiful new free book about bigger, easier poultry profits. Address
RADIO-ROUND INCUBATOR CO.
182 Roger Street Wayne, Neb.

Breeds Break About Even

By B. F. W. THORPE

DEFINITE knowledge of the net income from hens is the fact of super-importance during these war-ridden times. It is therefore of special interest and very essential to learn just what the net income above feed costs has been in the egg-laying contests among the most popular breeds during the past year.

At the All-Northwest Laying Contest, which closed its first year October 15th last, it was found that the White Leghorns stood first in net average income with $1.90 to the credit of each hen above all feed cost. The Rocks came second with $1.58; Rhode Island Reds, third, $1.26; Minorcas, fourth, $1.21; Wyandottes, fifth, 98 cents; Orpingtons, sixth, 46 cents.

This showing, of course, had only to do with the actual net returns from the eggs sold by the contest authorities from the hens entered of each of the breeds competing. If the value of the hens for meat, at the close of the contest year, were to be computed at market prices then obtaining, the heavier breeds would make a better showing.

For example, if the hens were to be sold for meat at the end of the year's laying period, Rocks and Reds, weighing two to three pounds heavier than Leghorns, would have brought from 50 to 60 cents more per hen to add to their egg incomes. If, therefore, the reckoning be done on the dual-purpose basis, the net income from the Leghorns, Rocks, Reds, and Wyandottes is found to vary but little for a given expenditure of feed consumed. This conclusion is upheld by the results shown in the different American laying contests.

Get Your Money's Worth

DO YOU know of any farmers who buy all their chicken dinners and many of the eggs they use, as well? There are many more of this class of poultry buyers than seems possible. These farm buyers of dressed fowls, and town and city buyers as well, frequently get cold-storage stock that is flavorless and insipid when cooked, and think the birds were unfit and inferior when killed. But many of these unsatisfactory fowls have been water-soaked, and from 40 to 50 cents' worth of the best part of a turkey, and smaller fowls in proportion, has been dissolved out of the carcass by being shipped to market packed in ice, which melts and does the mischief.

Moral: Buy your poultry from local poultry raisers whenever possible, and get the full value for your money in flavor and nutrition.

A Low-Cost Brooder House

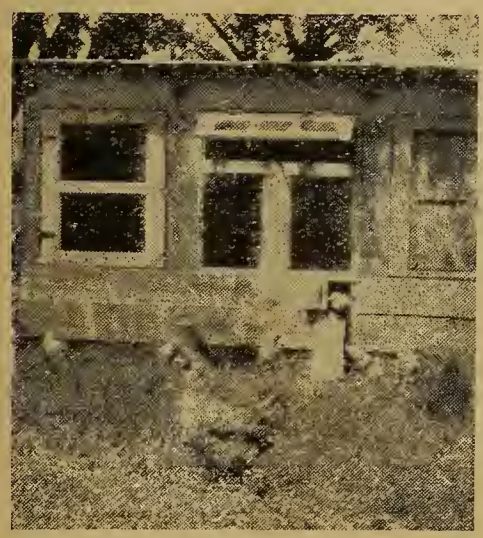
By J. L. Justice

IT IS folly to hatch high-priced eggs and feed chicks costly feed without being prepared in advance for the comfort, safety, and general well-being of the chicks after they hatch. This, of course, is specially true of the winter and early spring hatched broods.

The photograph shows a brooder we made last year. It is large and roomy, easily accommodating the chicks from a 200-egg incubator, and it took me about two days to construct it. The framing material was old 2x4 stuff of short lengths that had collected about the farm. The brooder is 6x8 feet, built on runners so that it may be hauled around the premises when it is desired to change its location.

Here is the bill of materials used:

Runner sills, two 2x4's, 9 feet long.	
Cross sills, four 2x4's, 6 feet long.	
Front studding, four 2x4's, 3¾ feet long.	
Back studding, four 2x4's, 20 inches long.	
Rafters, four 2x4's, 7½ feet long.	
Flooring, 48 feet 1-inch boards.	
Sheathing, 70 feet of boards.	
Rubber roofing, one-half roll	$1.00
Siding, shiplap, 100 feet	3.60
Hardware—hinges, nails, etc	.40
Hover complete	10.00
Cash expenditure	$15.00



Barrel coops are back numbers: good housing is economy

The brooder lamp and metal case are located at one end on the exterior. The location makes little difference, as the wind does not affect the working of the lamp. There are two large doors, 21 inches wide and 27 inches high, one on each end, for putting in litter and cleaning and disinfecting inside. The ventilator window at the top is 7 inches high and 27 inches long, hinged at the top. The chick door at the bottom is 5 inches square. There is about 7½ square feet of glass surface in the front, which admits plenty of sunshine and makes the house drier and more sanitary.

Many prefer the coal-heated stove brooders; but, whatever source of heat is used, my experience has convinced me that no one should use hens for hatching and brooding chicks when they should be on the laying job.

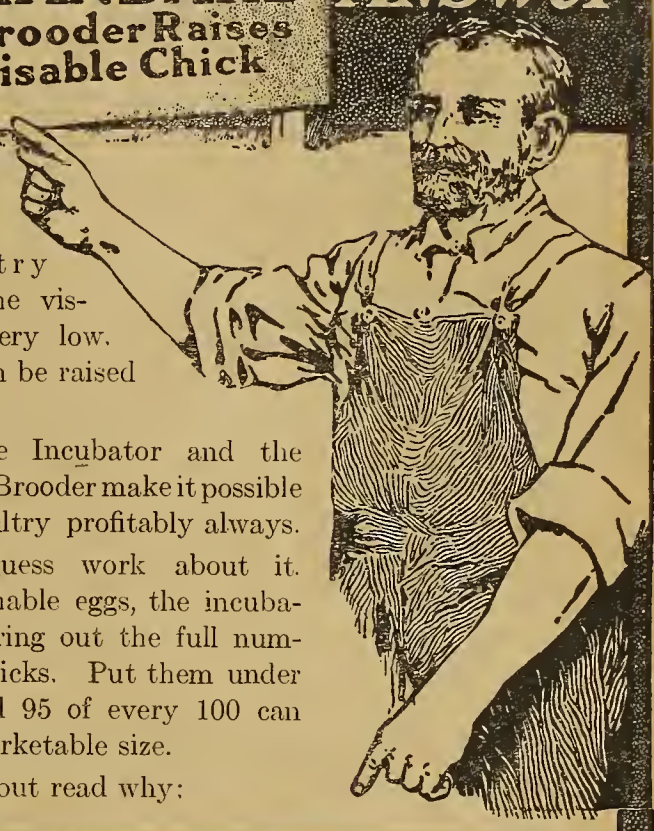
THE poultry business comes about as near to furnishing an all-the-year income as any branch of farming.

Ten sisters of these Barred Rock hens averaged over 200 eggs each in the Storrs (Connecticut) Laying Contest last year

The BUCKEYE Incubator Hatches More and Better Chicks

The STANDARD Colony Brooder Raises Every Raisable Chick

Here's the Answer



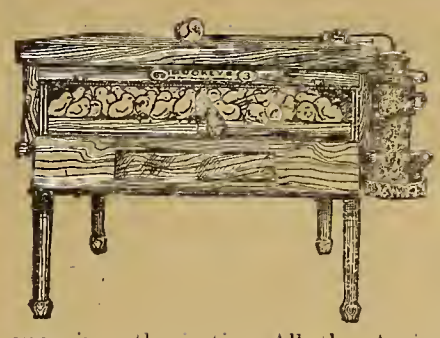
Your country needs meat. The visible supply is very low. Poultry alone can be raised quickly.

The Buckeye Incubator and the Standard Colony Brooder make it possible also to raise poultry profitably always.

There's no guess work about it. Given good hatchable eggs, the incubator will always bring out the full number of healthy chicks. Put them under this brooder, and 95 of every 100 can be raised to a marketable size.

That's strong, but read why:

BUCKEYE THE PERFECT INCUBATOR



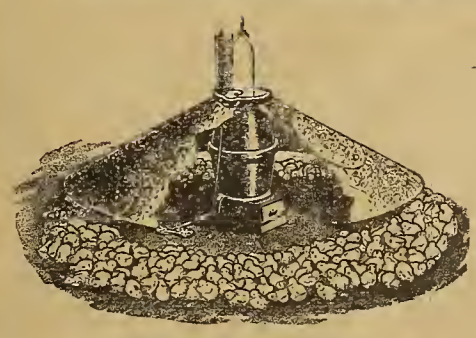
It's built **up** to a standard, not **down** to a price. It embodies all the experiences of 25 years' success. Its principles are recognized everywhere as correct, and its construction is perfect.

It is used by over half a million breeders—in the largest ranches and in the piano-box outfit of the beginner—and every user is enthusiastic. All the Agricultural Colleges and Experiment Stations endorse it. Success always accompanies it.

Our guarantee is simple, but look! The Buckeye is guaranteed always to give a perfect hatch of the largest and strongest chicks, the first time you use it. If it doesn't, we take it back.

There's real reason for Buckeye superiority. We've put it into a striking new catalog, with a wonderful array of proof. Get that catalog! It means success with poultry! Write for it today.

STANDARD Colony Brooder



Makes three chicks grow where one grew before, and removes the gamble from chicken raising.

Its use has ended the awful mortality of chicks, reduced operating costs for any number from 100 to 1000 to less than six cents a day; reduced labor to a fourth and hastened chicks to profitable maturity in less time than ever.

It's the most practical brooding device ever invented, simple, safe, sure, sanitary. Burns soft or hard coal, keeps fire 24 hours at one coaling, requires little attention. **Write your own guarantee**—we will sign it.

Our catalog will absolutely convince you of its wonderful results, told over their own signatures by delighted patrons, who have learned that there is such a thing as certainty in chicken raising, and who know that it is found in Buckeye quality and Buckeye service. Get that catalog today!

The Buckeye Incubator Company

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Pacific Coast Branch: Box 1021, Oakland, California

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Biggest Hatches Strongest Chicks

That's what you want—that's what you will get with my Champion Belle City Hatching Outfit — and I can prove it.

The whole story is in my big book "Hatching Facts" *in colors*, sent Free. It tells how money is made—what pleasure folks have raising poultry the Belle City way. Get this book and you'll want to start one of these wonderful Hatching Outfits making money for you. 1, 2, 3 months' Home Test—Satisfaction guaranteed. Make big profits this season by using my

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You cannot get a better Hatcher at any price—Hot Water—Copper Tank—Thermometer Holder—Deep Nursery—Self-Regulating Fibre Board Double-Walled construction that has led the field for over 12 yrs. The kind used by Uncle Sam — leading Agr'l Colleges and over 650,000 of America's most successful Poultry Raisers. Also use my $5.25 World Famous Hot-Water, Double-Walled, big, roomy, 140-Chick Belle City Brooder—guaranteed to raise the chicks. When ordered with Incubator, both only $12.95. Freight Paid East of Rockies and allowed that far if you live beyond. You can also share in my

$1000 Cash Prizes

Conditions easy. With this Hatching Outfit and my Guide Book for setting up and operating, you can have poultry in abundance, as shown here. Order now or write today for my big Free catalogue "Hatching Facts" —the most practical guide to success with poultry. A postal will do. Jim Rohan, Pres.

Belle City Incubator Co.
Box 100 Racine, Wis.

Guinea versus Turkey

By J. K. Jenks

NOW that the item of feed cost plays such a controlling influence on poultry production, the feeding habits of poultry families can well be studied more carefully.

The turkey's ability to "rustle" for a goodly part of its living after getting by the early delicate period constitutes a profit-saving factor now more than ever of importance. But some are coming to believe that the guinea is a better prospect for profit than the turkey.

The demand for young guineas when from two to three months old, weighing at that age from one to two pounds, is steadily growing in favor as a substitute for game birds, which are now much less plentiful. These young guineas bring the grower from $1 to $1.25 per pair. Sold at the age named, they need not cost the grower for feed over one fourth to one third as much as chickens having the same market value,

Guinea chicks are persistent hunters

since they will gather practically all of their feed in the pastures and cultivated fields after they are three weeks old. Before that age the baby guineas must be coddled about the same as turkey poults of like age, or else heavy losses will result from chilling by dews, rains, and animal enemies.

What's What in Cheese

By R. Robinson

THERE are more than one hundred different kinds of cheese known in the world's markets, many of them differing more in name than in flavor or composition. They may be classed as solid or pressed, and soft or molded, of which latter kind less than a dozen varieties may be called staple foods.

At the top of the list stands our common American Cheddar, which is found, usually on a cutting and weighing machine, in nearly every grocery store throughout the length and breadth of our country, and is the variety generally made in our American cheese factories. The consumption of this cheese in the United States amounts to about eight times as much as all other varieties combined, suggesting that there must be some good and sufficient reason why this is so.

One principal reason is that the process of manufacture is more suitable for factory production, as great quantities of milk can be gathered in one place to be made into cheese once a day, something that cannot be done with such general success in making any other variety. Another reason is that American Cheddar is more pleasing to the Anglo-American taste and palate. Americans, as a rule, like a mild, rich-flavored cheese with little odor.

Then, too, American Cheddar is a standard balanced article of food; in fact, the "standard" of all single staples in general use for human food in most parts of the temperate zones. A well-ripened Cheddar cheese of good quality, such as is made and accepted for export, contains in 100 pounds, on an average, 35 pounds of water, 33 pounds of fat, 27 pounds of proteids, and 5 pounds of sugar, ash, and other mineral matter. An old cheese will contain even less water. Of course water is necessary in food; but when you buy a pound of beefsteak for 30 cents, just about 20 cents goes for water and bone. A pound of good American Cheddar at 30 cents has no bone, and the water costs less than 10 cents.

When you Figure *it* all up —

you may find some of your cows are a liability instead of an asset. Why? Almost every cow can be a profitable producer if her system is working properly and she is free from disease.

Kow-Kure, the great cow medicine, is just what the avarage overforced milch cow needs. It works on the digestive and geuital organs aud puts the system in condition to prevent disease and produca properly. Also a sure remedy for Abortion, Barreuness, Retaiued Afterbirth, Scouring, Lost Appetite, Bunches and other common diseases.

Try Kow-Kure on your poor milkers—you'll find it makes good every claim; in many dairies it has turned losses into profits. Feed dealers and druggists sell Kow-Kure; 55c and $1.10 packages. Writa for free treatise, "The Home Cow Doctor."

Dairy Association Co.
Lyndonville, Vt.

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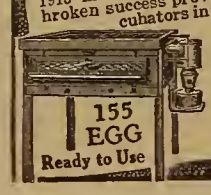

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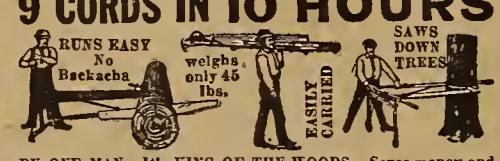

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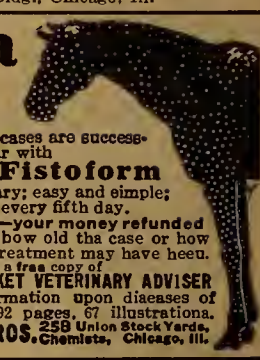

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How to get a horse from a burning barn?

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How to feed your cows to give the right color to your butter?

How to prepare cattle for shipment to avoid heavy shrinkage?

How to get rid of worms quickly?

How to pick a good dairy cow?

How to tell when pregnant animals will drop their offspring?

¶ These and many other valuable questions are answered in a new Live Stock Book we have just issued and which we will gladly mail, postpaid, to anyone who will write for a copy.

¶ It also contains record forms for keeping track of service dates, due dates for mares, cows, ewes and sows. Gives causes, symptoms and treatment of diseases of animals. In fact, is a very useful and valuable book for live stock owners.

¶ It is a thorough treatise on worms in live stock. Illustrates the various kinds of worms—tells how they rob the animals of their food nutrition—how they cause fatal diseases—why they are the direct and indirect cause of over $200,000,000 live stock losses annually and 90% of all live stock diseases.

¶ It tells why no farm or farm animal is free from these costly pests unless regular treatment is practiced. Tells how to get rid of them at very little cost and practically no labor.

¶ It tells about SAL-VET—that wonderful "Veterinary Salt"—a medicated salt which has saved thousands and thousands of dollars for American farmers. How quickly it gets rid of stomach and intestinal worms; how it tones the blood and aids the digestion; how it helps every animal to thrive better, look better, grow and fatten faster and costs so little that it really is not an expense but a big profit maker for live stock owners.

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¶ Now, when feed prices are so high, you should get the most return from what you feed, but that is impossible when your stock have worms. They do not always show the worm symptoms plainly, so don't fool yourself by thinking your animals not affected.

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Cream Tainted by Smoke

By Chas. E. Richardson

IN OUR neighborhood there lives a farmer who has quite a reputation as a good butter maker. I met him last winter, and I asked him how he was getting along with the butter end of his dairy business.

"Well," he replied, "I seem to be able to sell all that I can make—that is, so far; but the past few weeks I have had a few complaints from some of my old customers."

"What is the trouble?" I asked.

"Oh, different ones say that it does not seem to have that nice fresh taste it used to. And the funny part of it is that I myself can notice a sort of bitter flavor to it," he told me.

"Can't you locate the cause?" I inquired.

"No," he replied. "I've watched every part of the making of it, and it seems just the way that I always made it. I wish you could come over and see how things look to you." I knew that he was very "fussy" when he milked, and I did not suspect trouble there. So I asked him how he stored his cream before he ripened it.

"In the summer I always keep it on the ice in a separate ice chest for that purpose," he told me, "but lately I've been keeping it in a cold spare room at the other end of the house, so no odors from the kitchen can reach it. I churn twice a week, and I ripen the cream myself—that is, I do not let it get sour itself, but ripen it as I think it should be."

It seemed strange so far to me, but I asked him to let me see where he had

Dairy products are easily tainted by odors or impure air

the cream stored. So we went into the spare room in the other part of the house. It was far enough away from the kitchen and cooking odors. But I noticed that the room was closed tight as far as the windows were concerned. I also detected a strong smell of tobacco smoke. I asked about it.

"I don't notice any tobacco smell," he said, "but my hired man sleeps in the next room, and I know that he is a great fellow to smoke. The minute he jumps out of bed and the last thing at bedtime he has a pipe in his mouth."

"Well," I explained to him, "I should not be surprised if we had discovered the cause of your 'off' butter. Of course, you use tobacco, so you would not notice the odor of the smoke as quickly as I do. But to me it seems very strong of smoke in this room, and to make it worse you have the windows closed tight so there is no chance for a circulation of fresh air, which is necessary to prevent cream from 'smothering,' as it is called."

"The reason that I kept the windows closed was because I was afraid the cream might freeze," he explained.

"Now, you put your cream in a room where there can be fresh air and no bad odors, or put the hired man somewhere else, and air out this room thoroughly, and I feel sure that you will not have any more bitter-tasting butter," I said.

About a month after that I met him again at the village, and I inquired if the butter still had a bitter flavor.

"I put the cream as you suggested into another room with a circulation of fresh air," he said, "and as far as I can see it is all right again. But, to tell the truth," he added, "I was worried quite a little about it, and it seems strange that the cause was such a simple thing."

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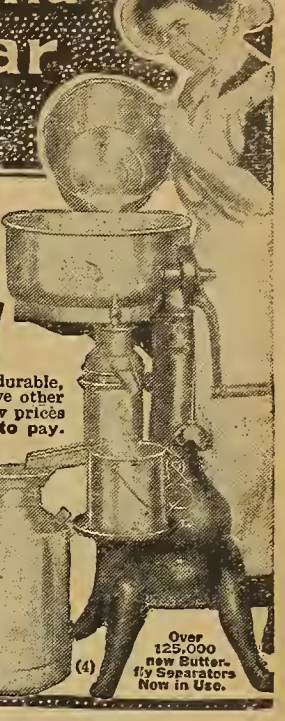

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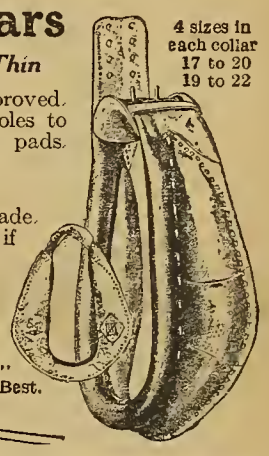

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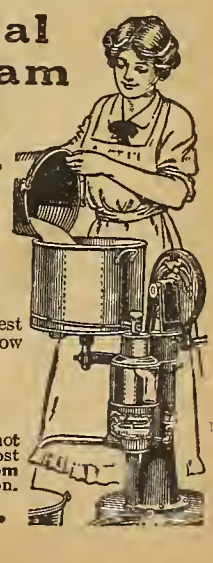

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American Separator Co., Box 1058, Bainbridge, N. Y.

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Condition Your Stock Drive Out the Worms

Spring is here—your animals have long been on dry feed and as grain, hay and fodder do not contain the laxatives so abundantly supplied by grass, they are apt to be out of fix.

Now's the time to feed Dr. Hess Stock Tonic to **your horses,** to condition them for spring work, so that when the sun shines they will be rid of their old coat, full of stamina and ready for business.

And don't overlook the spring **pig crop**—the money-makers. Start them off free from disease—free from worms, by a course of Dr. Hess Stock Tonic.

Your cows will be benefited by Dr. Hess Stock Tonic, and it will keep your **feeding cattle** right up on their appetites during the finishing period.

Excellent for **ewes** at lambing time.

Dr. Hess Stock Tonic contains laxatives to regulate the bowels, diuretics to remove dropsical swellings, tonics to improve the appetite and increase digestion, and vermifuges to expel worms.

There's a dealer in your town that will supply you with Dr. Hess Stock Tonic and guarantee it to do these things.

Dr. Hess & Clark, Ashland, Ohio

You buy my Stock Tonic from a dealer in your town at rock-bottom prices.

Dr. Hess Poultry PAN-A-CE-A
will help make your hens lay now

Dr. Hess Instant Louse Killer Kills Lice

First Aid to a Horse

By Dr. John Benson

MANY sprains and accidental cuts are received by horses in the winter. This is the toll of sliding and slipping on frozen ground and icy pavements.

A simple treatment for a sprain is to bathe the injured part in warm water for 15 to 20 minutes. Rub until dry. Keep a pressure on the part during the process. The rubbing and massaging should be around the joint, and not upon the bony projections. The nerves and vessels are in the hollows and depressions.

Continue the bathing for two days. Use a good liniment, but not too much. Knead the joint or sprained tendon several times a day, and bandage tightly. The kneading process reduces the inflammation by stimulating the nerves and vessels.

A cut should be cleaned thoroughly. No matter how slight, the injury should not be neglected. It is just such little things that cause tetanus.

If a horse has a cut near a hoof, pus often burrows down underneath the hoof and causes much trouble. Many of the chronic conditions resulting from cuts may be avoided by proper attention.

The treatment for such a case is to soak the foot, if possible, in an antiseptic solution for 10 to 15 minutes several times a day. Otherwise bathe the affected part with the solution. Dry thoroughly, immediately following the bath. A good antiseptic solution to use is a 2 to 4 per cent solution of any of the coal-tar distillates and water.

If Your Copy of Farm and Fireside is a Little Late

NOT all the mail trains are running on time these days. The railroads are congested. So if your copy of FARM AND FIRESIDE is a little late please exercise patience. It will reach you after a few days—at the outside. THE EDITOR.

World Interest in Stock

By Thomas J. Harris

THE war with Germany has focused the eyes of the world on live stock. The International Stock Show held in Chicago early in December again framed that statement beyond question.

For instance, Ardmore, the Grand Champion Hereford bull, was put on the auction block. When the bidders were through, $31,000 was paid for him. Merry Monarch, Grand Champion Shorthorn steer, sold for $2.10 a pound. He weighed a little more than 1,600 pounds. The sale of Ardmore shows one thing in particular, and that is that men with unlimited means are breeding cattle.

It will mean that the breeds will go on to their highest development whether large profits are made or not. Men who can afford expensive individual cattle are becoming interested. Likewise a new market for good bred stock is opened.

Colleges Won Many Prizes

The agricultural colleges were strongly in evidence at Chicago. They won many prizes in all the departments, and these prizes won in open competition are indications of the college men's abilities and usefulness.

The hog show was particularly good, if adjectives may be used to qualify superlatives, for description of International Stock is painting the lily and perfuming the rose. The stock is the world's best. All the breeds were represented.

Strikingly interesting was a wild hog. It would have weighed 40 pounds, round-backed, big-eared, straight-tailed, with none of the qualities that the well-bred hog shows. It explained again the fact that blood *does* tell. Unusual interest was shown in the sheep pens. Good prices and increased appreciation of their easy money were the reason.

In the draft-horse show there was quality to spare. On exhibition were six horse teams under harness. The fancy drivers drew large crowds at night.

The International promotes interest in live stock, and live stock is the foundation of good farming.

300,000 Ford Owners Recommend it to You

OVER 300,000 Ford cars are running today on Hassler Shock Absorbers. Over 300,000 Ford owners say that they would not sell the Hassler at any price if they could not replace their present sets. With such testimony before you, doesn't it seem that you ought to investigate the

HASSLER PATENTED **Shock Absorber** For Ford Cars

and find out what it would mean to *you*, *your* family and *your* Ford?

The Hassler has achieved phenomenal success where scores of contrivances designed for the same purpose have failed because the Hassler actually does the three things a shock absorber should do. It absorbs jolts and jars and provides a gentle springy action. It prevents rebound. It eliminates sidesway. And along with this greater comfort goes increased tire mileage, reduced up-keep and quite a saving in gasoline.

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Write today for FREE TRIAL BLANK and we will have a set of Hasslers put on your Ford without a cent of expense to you. Try them ten days. Then, if you are willing to do without them, they will be taken off without charge. Don't ride without Hasslers simply because someone discourages you from trying them. Accept this offer and see for yourself.

Over 300,000 sets in use. Write today—NOW.

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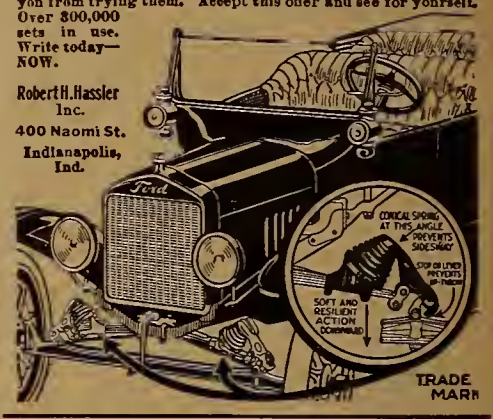

The South Invites the Thrifty Immigrant

The South is calling the Northern and Western farmer who is earnestly seeking longer and more favorable growing seasons; who is able to dispose of his present holdings at high prices and invest in Southern lands fully as productive at less than half the market price of Northern and Western lands. Two crops per year on the same land in the South are not unusual. Under present conditions, quick and assured returns in farm operation are demanded; the South offers the most attractive opportunities for the realization of such returns. For detailed descriptions of farms for sale in the South and for other information pertaining to Southern agricultural possibilities, address Department C.

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Nashville, Chattanooga & St. Louis Railway
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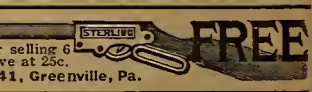

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—if you don't agree that the giant Kirstin pulls stumps quicker, cheaper, easier than you ever dreamed *possible,* send it back! Trial costs *nothing!* Think what an easy way to turn WASTE into PROFITS!

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Immediate Shipment
Direct from Factory—**SAVE $15 TO $200**—Simple in construction, strong and powerful, few working parts—easy to understand, easy to operate, easy to own. Buy practically on your own terms—Cash, Payments or No Money Down. 90-Day Trial—5 Year Guarantee. Write for latest prices.—ED. H. WITTE.

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IRON AGE Potato Planter

solves the labor problem and makes the best use of high priced seed. Means $5 to $50 extra profit per acre. Every seed piece in its place and only one. Saves 1 to 2 bushels seed per acre. Uniform depth; even spacing. We make a full line of potato machinery. Send for booklet today.

No Misses
No Doubles

Bateman M'f'g Co., Box 38-B, Grenloch, N.J.

Feeding the Brood Sow

By W. L. Blizzard

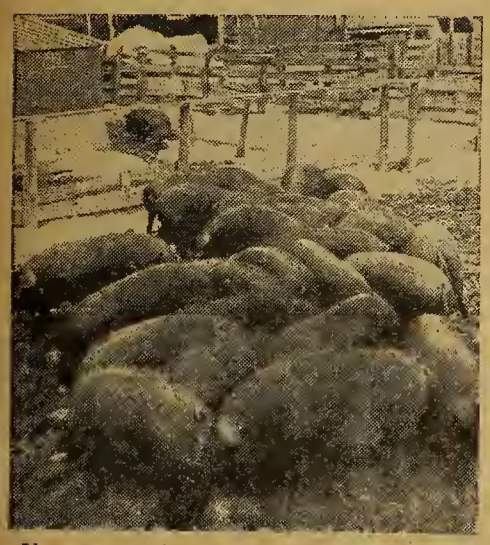
THAT the brood sow is doing double duty during pregnancy must not be overlooked. Not only is she keeping up her own bodily function, but the development of the fetal litter is constantly increasing the drain on her system. Although feeding at this time will not need to be so heavy as after the pigs are farrowed, it should be liberal. The sow's condition should be good, neither too fat nor too lean. You cannot hope to get a good strong litter and maintain the sow in a half-starved condition.

If a brood sow is fed nothing but corn, she will become lazy and just move around enough to get her feed and then go back to sleeping quarters. She may look nice and sleek and pleasing to the eye, but she will not farrow those robust, strong pigs.

Every hog raiser has to take into consideration the feeds that are accessible to him. Those that are grown upon the farm are of first importance. But it will pay any breeder to buy tankage to balance his corn or kafir.

Corn and kafir are both markedly deficient in muscle and bone forming materials. For that reason they should be balanced with a feed that will remedy this. Tankage is a protein feed and balances corn or kafir.

A ration composed of kafir corn 50 parts, shorts 45 parts, and tankage 5 parts is excellent for brood sows carrying litters. Alfalfa hay supplied in racks in addition to this feed is also beneficial.



You cannot hope to get strong litters of pigs unless the sows are well fed

The addition of bran to this combination is of great benefit as the sow nears farrowing time. It gives bulk to the ration, helps to keep down the craving appetite, and has a beneficial effect on the digestive system.

The sow should receive enough of this feed to keep her in good condition. She needs this condition for reserve for the first two or three weeks after farrowing, as it takes about this much time to get her on good feed. A sow that has become too fat on corn or kafir alone is the one that has disastrous results.

During the winter more corn will be needed to keep the sow in good health, because it is much harder to supply green feed. Roots are valuable to supply this green feed and give bulk to the ration; but as roots are not grown very extensively in many States, alfalfa hay, preferably the last cutting, will take the place of it.

Charcoal, lime, and salt should be accessible at all times. These meet the hog's craving for a mineral matter in the feed. It is best supplied in a self-feeder. The constant use of such a preparation with a varied ration will in a large measure prevent a brood sow from eating her pigs at farrowing time.

The sow needs all the pure air that she can get; in good weather when there is sunshine she should have full access to both. Furthermore, she needs exercise every day.

Sunshine and exercise have a good influence on the unfarrowed litter. The sow that fails to exercise is liable to become out of condition and bring a weak, puny litter. She should have a dry, warm sleeping house kept in a sanitary condition and furnished at all times with good bedding so that the pigs will not pile up during the extremely cold weather.

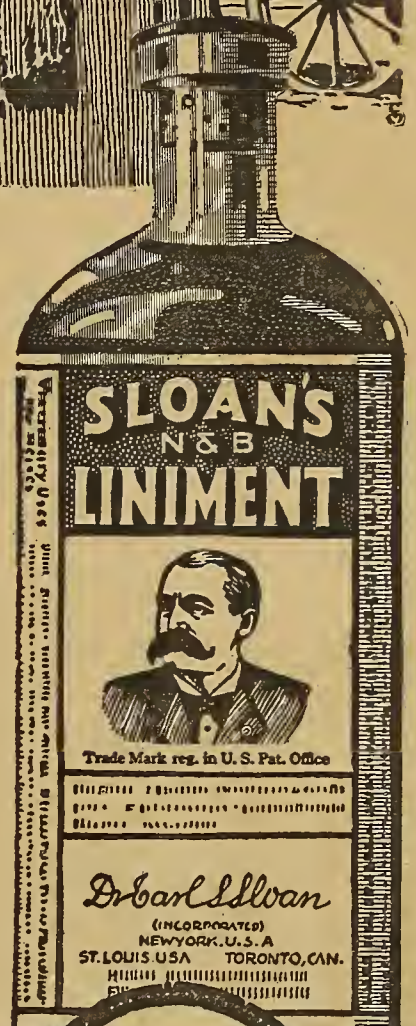
Jim, We Got To Do Our Bit!

WE farmers can't work for Uncle Sam if we're laid up with stiff joints, rheumatic twinges, sore muscles, lame back, and such things.

I don't take chances. The first sign of soreness is a signal for me to get busy with this Sloan's Liniment. I *don't rub it in* because it *penetrates*. Its counter-irritant action scatters the congestion and brings instant, soothing relief. My whole family swears by it.

And I use it on the live stock, too, Jim. It sends bruises, lameness, sprains, and all external ailments kitin' sky-high.

I save money by always buying the large size. Six times as much as you get in the small bottle, and I've got a supply on hand when I got to have it. Get a big bottle today, Jim, and keep on doing your bit faithfully and regularly.



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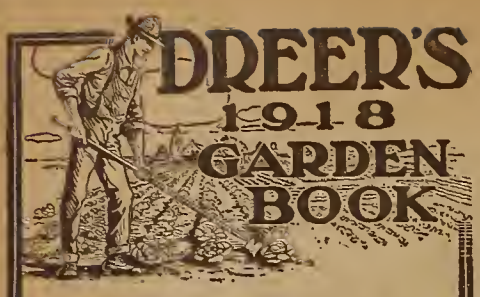

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will help you wonderfully to reduce the high cost of living. It is read by tens of thousands, professionals as well as amateurs, as an authoritative guide to all garden work, both for Vegetables and Flowers.

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Dreer's All Heart Lettuce is the most dependable hard heading variety ever introduced. Extremely solid heart. Flavor rich and buttery. Slow to run to seed, even in hot weather. Color beautiful yellowish green. 10c per packet; 35c per oz.

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New Catalog FREE

Describes the best and most reliable sorts of **vegetable, flower** and **field** seeds, **bulbs** and some new and rare **specialties** which we believe can not be obtained through any other American Seedsman. This Seed Guide gives cultural directions and tells how to plant for profit.

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Livingston's "TRUE BLUE" SEEDS

Make better gardens. All are tested for purity and vitality. Have been giving satisfaction for over 50 years. Be sure and try our

5 FINE VEGETABLES 10c

One large packet each of Bean, Beet, Lettuce, Radish and Tomato—postpaid. All are heavy yielding and exceptionally fine in quality. Try them.

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Gives helpful cultural directions and offers strictly high-grade seeds at fair prices. Write for it.

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"Where There's a Will—"

How often is the truth of the old saying brought home to us, "Where there's a will there's a way." Again and again we have seen people resolve to increase their income—and then increase it beyond their dreams.

There was one man, for example, Edward Johnson, who resolved to make more money. He was convinced that the difference between one man and another, the weak and the powerful, the great and the insignificant, was energy—invincible determination—a purpose once formed and then victory or death.

He became FARM AND FIRESIDE's representative. He believed that all men were born equal but that some had the ambition to overcome it. He soon learned how to get subscriptions. Since then his income has gone up and up.

We can offer you the same opportunity. Ask yourself these questions: "Do I want *more money?*" "Do I want *more experience?*" "Do I want to *climb higher?*" If you want them badly enough to work hard, then write today for our striking new offer.

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Plant This Giant Golden Sweet

Corn and save on your sugar. It's as delicious as the celebrated Golden Bantam and much larger, yet only 3 days later. It does *not* become mealy but remains sweet and succulent until too hard for the table. The stalks grow 6 ft. high and bear two to three ears each. We offer a large package of this seed, grown on our own farms, at 15c, postpaid. Our supply is limited, better order today. Also ask for our 1918 Catalog—*free.*

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GREGORY'S HONEST SEEDS

Tin Can Swells Income

By W. A. GRAHAM

"FARMING in a rut," says my neighbor, who was in a rut and now rejoices in being out of it, "is getting so firmly settled in a treadmill routine of growing certain crops as to make it seem well-nigh impossible to attempt growing other crops known to give better profits."

A leaf from his personal experience in breaking away from the old-time grain-hay farming system I believe will inspire some others to do likewise to their profit and satisfaction. Here is his story:

"The establishing of several vegetable and fruit canning factories in my own and adjoining communities furnished the stimulus needed to help me out of my own rut. Now, in place of confining my efforts to two or three staple crops which formerly produced only a meager living, I grow limited areas of several canning crops in a more intensive way, and have averaged a nice addition to the income from the staple farm crops which I still produce.

"The plan followed in growing the canning crops is to contract with the manager of the canning factory to grow a definite acreage of some of the staple canning crops, such as peas, beans, tomatoes, sweet corn, and small fruit. By planning for such of the canning crops as will best work in with a decreased number of standard farm crops, I can intensify my efforts and in some seasons double my farm receipts over my old style of farming.

"For example, strawberries, beans, and sweet corn grown for the cannery (by the way, father and son are partners and all their stationery shows that they are doing a partnership business, although the son is only seventeen) busily making every rainy day count every whit as much as the fair days.

This workshop in question, near Canton, New York, is divided into two rooms—one for carpentry, iron work, and general repairing; the other for painting. In addition to saving from $100 to $300 in repairinig and painting each year, they make various crates, hampers, and boxes in which to market fruit and truck, also egg crates, beehives, brooder coops, and various other farm supplies. These supplies are tastefully painted, and I can easily believe, as they contend, that their attractive marketing containers have added many times the cost of the shop and equipment in the better prices received for produce shipped to New York and other markets.

The shop was purposely made large and high enough so that wagons, motor truck, and farm machinery can be driven in and through both rooms of the shop for repairs and painting, and also movable poultry and hog houses can be built and painted under cover.

APPLE-MARKETING figures show that of the total production of thirty-five leading varieties of apples in the United States, Baldwin leads with 13.4 per cent of the total crop, Ben Davis a close second, and Northern Spy third. Fourth place is held by the Winesap, and fifth by the Greening.

Many a wind-swept farm home could be changed from a forbidding place to a thing of beauty by such a group of evergreens as here shown

may best combine with my regular farm crops; and asparagus, cane fruits, and tomatoes may break better in regard to cultural and harvesting requirements for my neighbor. But many of us are finding that we did not make the fullest and best use of a considerable part of our time until we began to plan and systematize our work, as was necessary to do when we took on the growing of several canning crops under contract.

"I feel sure that there are many general farmers who will read this who might with advantage contract to grow a few acres of some of the canning crops I have mentioned by joining with several neighbors to deliver co-operatively their produce to the factory, even if some distance away, with a motor truck. Such a plan of delivery our neighborhood has found to be a great economizer of time, and enables the growers of the canning crop to realize several hundred, or even a thousand, dollars more from a small area of land that will not be missed for the regular farming operations. Moreover, the building up of a great canning industry in this country is one of the important ways of bringing the Kaiser to his knees—by making sure of a great reserve food supply in addition to the regular harvested products."

A Money-Making Aid

By W. B. Collins

MY BUSINESS leads me to visit farms of every kind and character, and I often wonder why so many farms lack a well-appointed workshop.

I will describe one where I recently found a market gardener and his son

UNLESS the required spraying outfits and spray materials are on hand ready for use, longer delay in ordering these supplies is dangerous. Transportation will continue slow, and unprotected crops will mean double the money loss of former years. If spraying has never yet been done, this is surely the year to make a start.

Stop Grapes from Bleeding

By B. F. W. Thorpe

ALL who work with grapevines know how badly the canes bleed when cut, broken, or bruised in the spring after the sap is in motion. Mr. O. L. Leach, a Rhode Island grape grower, has found

a sure remedy. He reports that after having tried all remedies he could learn about he happened on this plan:

He uses a short piece of rubber tubing, about two inches long, of the right size to slip on the end of accidentally cut or broken canes. He puts a plug of wood in the other end of the piece of tubing or hose and ties strings tightly around the ends of the tubing to make water-tight joints. This plan might require too much time for large operations, but for the family garden supply it is well worth using.

MAULE'S SEEDS

Once Grown Always Grown

Send us 10c for a packet of Maule's Success Tomato seed which will grow a quantity of the heaviest and meatiest variety of tomatoes. Every lot of Maule's seeds is tested for strength and growing power before the seeds are sent to you.

THE MAULE SEED BOOK

176 pages full of valuable planting and gardening information **FREE**

Write for it today.

No matter what you want to raise in your garden, you will find complete information about it in this catalog.

You save money and get fresh seeds when you buy from

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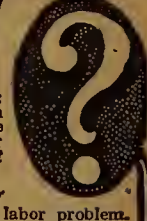
IRON AGE GARDEN TOOLS



Answer the farmer's big questions: How can I have a good garden with least expense? How can the wife have plenty of fresh vegetables for the home table with least labor?

IRON AGE Combined Hill and Drill Seeder

No. 306 Drill and Wheel Hoe

solves the garden labor problem. Takes the place of many tools—stored in small space. Sows, covers, cultivates, weeds, ridges, etc., better than old-time tools. A woman, boy or girl can push it and do a day's hand-work in 60 minutes. 30 combinations, $4.50 to $30.00. Write for booklet.

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$2.00 Samples only 10c.

We will mail the following 22 Packets choicest Fresh, Reliable Vegetable and Flower Seeds for 10c. Money returned if not satisfactory.

BEET, Crosby's Egyptian, best, sweetest early sort.
CABBAGE, New Glory, early, sure header. Large.
CARROT, Perfect, Half-long, best table sort.
CELERY, Brittle Winter, best, crispest. Keeps well.
CUCUMBER, Emerald White Spine, great favorite.
LETTUCE, Cream Butter, tender, popular heads.
MUSKMELON, Sweetest Gem, best garden melon.
WATERMELON, Deposit Early, earliest, sweetest.
ONION, Prizetaker, weight 3 lbs., 1000 bus. per acre.
PARSLEY, Triple Curled, best, most ornamental.
PARSNIP, Improved Guernsey, smooth, sweet.
RADISH, White Icicle, best, early, long, tender.
TOMATO, Greater Baltimore, best, large, smooth.
ASTERS, Show mixed. **WAVES OF GOLD,** fine.
ALYSSUM, Little Gem. **PINKS,** 50 Grand Sorts.
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MIGNONETTE, Sweet. Catalog and 10c check free.

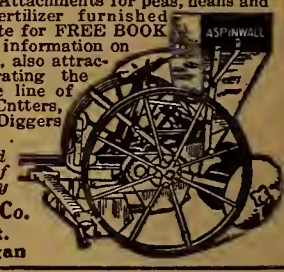
DEPOSIT SEED CO., Deposit, N. Y.
☞15 packets Grand Large Flowering Sweet Peas, 10 cts.

Aspinwall Potato Planter

The First Successful Potato Planter. The only correct drop, *one-man, automatic,* potato planter. Does *all* the work—*all* the time. *Needs no watching.* Plants *more acres* per day.

Saves Expense of Extra Man

Attachments for peas, beans and fertilizer furnished when desired. Write for FREE BOOK containing valuable information on this important crop, also attractive folder illustrating the Aspinwall complete line of potato machinery—Cutters, Planters, Sprayers, Diggers and Sorters.



World's Oldest and Largest Makers of Potato Machinery

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Jackson, Michigan

Let the manufacturer know that you saw his advertisement in Farm and Fireside. This will insure a square deal.

BALDWIN'S EVERBEARING STRAWBERRY PLANTS

That there is money in Strawberries no one will deny. There is more money in growing them four months in the year. A full crop this fall from plants set this spring. If you start right with Baldwin's vigorous plants, you will succeed. They are large, hardy, northern grown in new soil, heavily rooted—the sure grow kind.

Our Money Back Guarantee

Protects you. All plants are first class, true to name, packed to reach you in good condition (by express) and to please you, or we pay you back. Send for our new Berry Plant book. There are special features in it of value to you. Raspberries, Blackberries, Currants and Grape Plants—Baldwin quality—ars listed. We will start you right. Write tonight.

O. A. D. Baldwin, R. R. 23, Bridgman, Michigan

Write For This Double Value

Quality—Price AND The "Know-How" of Success

THE shortage of fruit—higher-than-ever fruit prices—gives *every one a reason* to plant fruit trees—and plant *quick!* But—*first* get the *double-value* of Stark Trees at Stark prices *plus* the Stark 102 years of Orchard Experience and Know-How—your safest guide to quick and biggest fruit and money returns. Write for *Two Free 10x12 inch Books*—double value in orchard-success information—and *Freight Prepaid Offer on*

Stark Bro's Money-Making Trees

Get the new profit truths about *Stark Delicious* (The Money Tree of the Farm), *Golden Delicious* (our new, exclusive variety—New Queen of Golden Apples) — pronounced by authorities to be superior in every way to Grimes Golden. J. H. Hale and Stark Early Elberta Peaches and all the other Stark Bro's improved young-bearing apple, peach, pear, plum, cherry and other fruit trees. Write tonight. These two books are worth "their weight in gold" to anyone who plants any fruit.

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Best for windbreaks, hedges and lawn planting. Protect buildings, crops, stock, gardens and orchards. Hill's Evergreens are Nursery grown and hardy everywhere. **From $1 to $10 per hundred.** Hill's Evergreen book and 50 Great Bargain sheet sent free. Write today. World's largest growers. Est. 1855.
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Storrs & Harrison Co.
Box 542, Painesville, Ohio

Saving Girdled Trees

By Charles Rapp

A YOUNG, vigorous fruit tree when badly girdled by mice or rabbits is still a good prospect for future usefulness if the proper saving measures are promptly supplied.

I came across some most convincing tree-saving testimony in a Missouri orchard last summer where a number of badly girdled choice young apple and peach trees gave promise of becoming as sound and vigorous as ever. When the snow is deep the trees are sometimes girdled above the wire protectors. Where this is the case the edges of the bark bordering the wound are smoothed and made regular by cutting the ragged parts with a sharp knife. This work is done before the buds start. Then scions taken from wood of the previous year's growth are cut a little longer than the space to be bridged. The ends of the scions are sharpened with a long sloping bevel, so that they will fit tightly when thrust well under the bark both above

Bark on opposite side was not gnawed off. This tree recovered

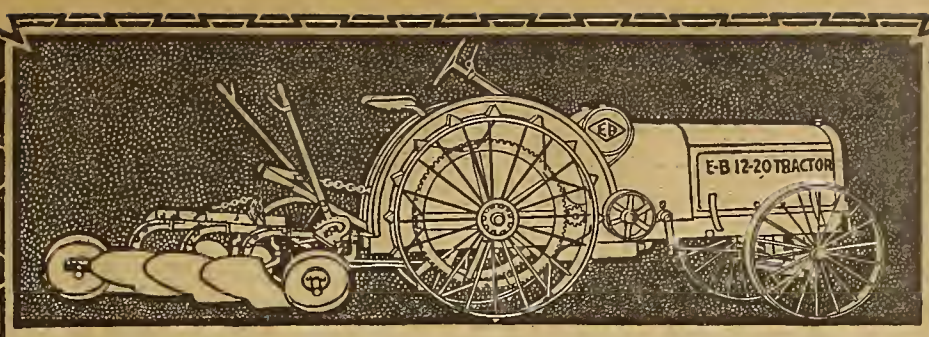
and below the wound. The spring of the wood holds the scions in place. Then all exposed surfaces of the scions at both upper and lower ends, and including the margins of the wounds, are carefully covered with grafting wax. Two scions will bridge the girdle of a young tree, but larger trees may need several, or say one every two or three inches of the surface girdled. Where the girdled portion is only a narrow strip, the tree can often be saved by bridge-grafting, even if the bark has been removed entirely around the tree.

Why Trees Winter-Kill

HAVE you studied the matter of fruit trees winter-killing, and the cause? In the more northern States, and in fact in many Central States, fruit trees suffer from winter-killing on account of making too late growth in the fall, and the wood is not properly hardened up before the freezing weather begins. It has been found that much of this winter-killing can be prevented by stopping the cultivation of the soil in the orchards early in August, and sowing a cover crop of clover, rye, or any other cover crop desired. This cover crop takes the moisture from the soil, and some of the available plant food, thus preventing the rapid soft growth of the trees late in the season. In consequence the wood growth already made hardens up, and is able to withstand the severe winter weather.

HAVE you some long, strong sunflower stalks? If so, save and store them carefully and use next year for bean poles. They work well.

IF YOUR orchard, or any part of it, is old, neglected, and unprofitable and beyond successful renovation, get rid of it root and branch as a cumberer of the land that may be put to more profitable use. Do the job now or else begin on its renovation.



25% More Power On the Draw Bar

STILL more power this year in the E-B 12-20. And you get it on the draw bar. Strength and endurance for years of hard service. Economy—labor conservation—low upkeep. The E-B is above all things *practical*. It carries the only successful motor driven plow hoist that makes tractor plowing in the fence corners easier than with horses.

It's only natural that the E-B 12-20 is regarded generally as the most popular tractor on the market for the average farm. Other sizes make the E-B line the one complete set of tractors to choose from. The 9-16 for small farms. The 20-35 for farms above medium size and the 40-65 for the largest farms and heaviest work.

Ask your dealer for E-B Implement Company goods when you visit his store, or mention the machine in which you are interested and we will mail facts, field views and suggestions. Also bulletins prepared by the E-B Agricultural Extension Department.

EMERSON-BRANTINGHAM IMPLEMENT COMPANY, INC.
Good Farm Machinery ROCKFORD, ILL. Established 1852
Your Problem—To increase crops with decreased help. Your Remedy—E-B Tractors and Tractor Implements

9-16

All E-B Tractors have these features: 4 Cylinder Motors; Kerosene Burning. The E-B is the original 4 cylinder, 4 wheel line. For 10 years one policy of design and manufacture has been followed consistently.

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FARM MACHINERY

20-35

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but not unless you have the right kind of a garden.—And you can't raise a good garden without good seeds to start with.—Iowa grown seeds are the best in the world and are the kind for you to plant, and **Field's is the place to get them.**

Write for Garden and Seed Book and Seed Sense, Free

Our Seed Book tells you the real truth about the seeds, and gives you common sense instructions about gardening. And Seed Sense is the dandiest little garden paper you ever saw. We send it free to our customers. Get these hooks, and raise a big garden and beat the "High Cost of Living." We will send them free.

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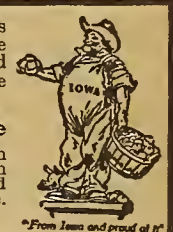

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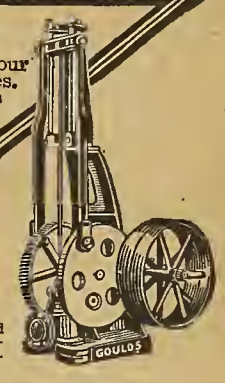
Send today for this book.



Gould's Fig. 1454 Deep Well Working Head for air pressure or elevated tank water systems.

Burpee's Seeds Grow

More seeds were planted last year than ever before and many thousands of families enjoyed fresh vegetables from the garden for the first time.

The year 1918 will see a still greater number who will grow their own Flowers and Vegetables and will profit by their experience and plant only Quality Seeds.

Burpee's Annual For 1918

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"The House That Pays Millions for Quality"

How to Kill Smut

By C. R. Burke

FROM one fiftieth to one twentieth of the oat crop is destroyed by smut every year. The smut is on the seed and the formaldehyde treatment will kill it. Here are the condensed rules of the Iowa Experiment Station for killing smut:

1. Spread out 40 bushels of oats, five or six inches deep, on a clean floor.
2. Mix one pound of formaldehyde (40 per cent) with 40 gallons of water in a barrel, and stir well.
3. Sprinkle the oats with the formaldehyde mixture until they are saturated. A good plan is for one man to shovel the oats into a pile while another sprinkles the mixture over them. They are not exposed to the air for so long a time and less gas is lost. Be sure the pile is well soaked.
4. Cover pile with blankets or sacks to keep the gas in.
5. Leave the pile covered overnight, then remove the coverings and shovel oats out thin to dry. Shovel them over from time to time. The oats may be sown as soon as dry enough to run through the drill, but make allowance for the swollen condition of the seed when setting the drill. It is a good plan to treat the oats late in the afternoon. Then they can be left overnight without danger of heating.

If you have more seed than you need, you can safely feed the surplus after all the gas has escaped. This takes about two days.

A charge of dynamite and a stump puller succeeded in getting this huge stump out of the ground

Annual Pasture Crops

By M. N. Harrison

THE use of annual pasture crops as a supplement to native pasture grass, or to provide pasture on the small farm, is receiving much attention. Knowledge of the varieties of annual crops best suited to the soil and climatic conditions is important.

Many owners of native grass pastures could supplement to advantage their grass with an annual forage crop during part of the grazing season. Such supplementary pasture, especially during the early part of the growing season, will prevent much injury to grazing land by avoiding too close grazing and by encouraging the production of seed.

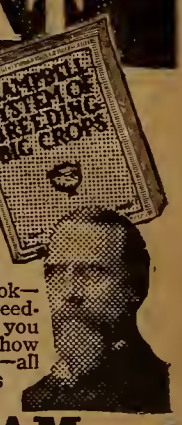
Some people who have no native-grass pasture, or who have not succeeded in establishing a permanent pasture of tame grasses, are forced to depend upon the annual pasture plants.

The earliest annual pasture crop that can be seeded in the spring is oats. A heavier seeding should be made than when the crop is intended for grain purposes only. Stock may be turned in on the oats as soon as it is 8 or 10 inches high.

A mixture of oats with wheat, rye, or barley is preferred by some persons, whereas others prefer to plant oats only. There is really nothing gained by mixing.

Sweet sorghum is seeded May 10th to May 25th at the rate of a bushel of seed an acre, and is ready for pasture by July 1st. If not too heavily pastured, sweet sorghum will remain good until fall.

OATS FROM WHEAT



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Cleans, grades, separates and sacks, any grain or grass seed or rankest mixtures! All in a single operation!! Takes out all oats! Cleans out dust, and trash and wicked weed seed!

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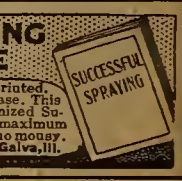

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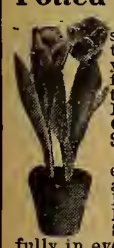

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Why Corn Yields are Low

By John Calderhead

GROWING corn under conditions to which it is not adapted is the principal reason for low average yields. Other reasons why the yield is low are the decrease in soil fertility and the failure on part of the grower to rotate crops properly.

The only time when it is desirable to change seed is when an inferior variety of corn has been grown or where a person has made no effort to select the seed properly year after year. In these cases it will pay to secure good seed from a person near-by who properly selects his seed, provided the soil conditions of the two farms are similar. If, for some reason, home-grown seed is not in good vitality or of good quality, better results can be obtained by securing first-class seed grown as near home, and under conditions as nearly like those under which it will be planted, as possible.

Every person should select and save his own seed, as the corn which was grown on his farm is likely to be better suited for planting there than that grown elsewhere. Many persons, however, would rather buy seed than go to the trouble of properly selecting and saving it.

For this reason there will always be an opportunity in every locality for one or more persons who are capable of producing good seed corn to build up a local trade, and thus dispose of a part of their crop at seed-corn prices. The community seed-corn grower or breeder not only would be engaged in a profitable business for himself, but would also furnish an opportunity for others in his locality to obtain seed suitable for growing on their farms.

Hauling wheat in Australia with a tractor. Several loads are hauled at a time

Seasonal conditions are regarded by many corn growers as dominant factors in growing corn. These conditions vary so greatly from year to year that no one method of seed-bed preparation, planting, or cultivation of corn will consistently give better yields than every other method. The person who by the exercise of good judgment uses methods of tillage that meet the seasonal conditions to greatest advantage is the one who, on the average, is the most successful.

The critical period in the growth of corn is in July and August, and during these months drought and hot winds may destroy in a few days the accumulated benefits derived from thorough work in preparing the seed bed and caring for the corn during the early part of the season.

Often, because of drought during the latter stage of the growth of the corn, that which has the greatest capacity to yield is, because of the greater development of foliage, the first to dry up.

On the other hand, corn that has made a smaller growth because of poor cultural methods survives the drought and also produces the greatest yield of grain.

The person who consistently practices methods that conserve moisture and develop plant food, and who plants his crop opportunely, will, however, obtain the best average yields for a period of years.

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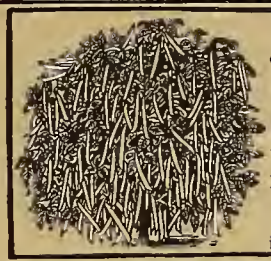

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In the Spy Net

The Stirring Second Chapter of an Absorbing War Story

By EMEL PARKER

CONSCIOUS that she had been waiting all morning for this message, Eugenia went quickly into the room.

The stranger was sitting up in bed, again wrapped in the green dressing gown, but he looked more rested. His eyes brightened as he saw her.

"I do hope that I haven't bothered you by asking you to come," he said quickly. "But when I woke up I felt so much better that I couldn't wait another second to tell you how grateful I shall always be to you. I believe that you have literally saved my life. I'm not sure that it's worth saving, but at least I want you to know that words cannot express my gratitude."

His words were conventional, but his smile was delightfully boyish and charming.

She answered formally but with sincerity:

"I am so glad that I have had an opportunity to help you."

"You see, I have been very ill," he went on quickly, as if in haste to be done with explanations. "I came down to Georgia to recuperate. A friend of mine in New York owns one of these islands below here, and he's built on it a fairly comfortable house where he stays during the hunting season."

"Oh, I didn't know that any of the islands below here were owned by private people. I thought that since the war the Government had taken them all over for their naval experimental stations."

He glanced at her quickly.

"We must send word to your friend that you are with us," she went on.

"Oh, no! You see he is not there now. He just gave me the keys and told me to go down by myself."

Eugenia was unable to restrain any longer the question which had occurred to her a hundred times since his arrival.

"But how did you get to this island? Surely the bay is impassable, and, anyway, we are the only people on it—some darkies at the other end, but no one else."

He looked embarrassed.

"YOU see I—I came down to Georgia Junction by train. Then I got the idea that I would go down the bay by moonlight in a sailboat. I got a late start, had various mishaps, and finally this morning the storm overtook me and drove me to the nearest shore. I followed a path which I saw in the lightning, and by great good fortune it led me straight to your door."

"What an experience!" she exclaimed. "But how very foolish you were to attempt such a hazardous trip, particularly when you were recovering from an illness! Now that you are here I'll send Sam across the bay to fetch the village doctor."

"You must not get a doctor!" he cried.

His vehemence startled her. He went on quickly:

"In the last few months I've seen so many doctors that I can't bear the sight of them. They have all agreed that I was merely run down and could be made absolutely right by a complete rest of a few weeks—they say months, but I say weeks."

Suddenly Eugenia laughed.

"I just happened to think of a conversation I had with my aunt this morning," she explained. "She disapproves of the manners of my generation, and I think that I agree with her, for I've just realized that you don't even know in whose house you are. My name is Stepham—Eugenia Stepham."

"'Stepham,'" the man repeated. "That name sounds strangely familiar. Haven't I seen something about it in the papers lately?"

"Oh, yes—the reports of the new submarine destroyer named for my father. He was Commodore Stepham of the United States Navy. That's what you mean, don't you? As a matter of fact, I think that they are testing out that very boat on one of the islands I spoke of, not far south of here; but of course I can't be sure—it is a well-guarded secret."

"Can you ever see any boats from here that look as if they might be destroyers?" he asked eagerly.

"I have seen only one, and I am not quite sure of that. But of course they usually try them out after dark, for their work is so vital to the country's success in this horrible war that they dare not take any chances of being observed before they go into actual conflict."

After a moment of silence he said, and to her the words sounded as if he had often rehearsed them:

"But I forgot—you do not know my name. It was very thoughtless of me not to have introduced myself before. My name is Carl—Carl Stackpoole."

"Just to satisfy Aunt Sarah, may I ask—are you an American?"

"Of course I am. Why do you ask?"

"I don't know why, but I thought you weren't—it is an undefinable something in your voice and your manner. But perhaps it is only because I have lived down here so long that anyone who doesn't talk like a Southerner seems foreign to me. But there, you mustn't talk any more. You look quite exhausted. If you don't want me to get a doctor you must go to sleep at once. I'm going to pull down the shades so that the sun won't get into your eyes, and then I won't bother you any more."

"You are so good," he murmured.

"Now I can appease Aunt Sarah," she thought. "Carl Stackpoole—I like that name."

She moved toward the window and, deciding to close the shutters, pushed a table on which were lying some of his garments noiselessly out of the way. As she did so her foot struck a hard object which had been concealed. Looking down she saw that it was the black valise which the stranger had guarded with such care. Before she could move, it had turned completely over and its contents had spilled out upon the rug.

She caught her breath.

A feeling of sickness came over her—the ebony toilet articles, the leather-bound books, and two small locked boxes, now lying at her feet, were plainly marked R. K. M.!

THE knowledge that the man whom she sheltered under her roof had told her that his name was Carl Stackpoole and yet had the initials R. K. M. marked on all the contents of his valise intensified Eugenia's undefined fears.

She was not inclined to be hysterical, however, so she put the articles back into the bag, still unobserved. Closing the blinds she crept out of the room, for the man's regular breathing indicated that he had already fallen asleep.

She proceeded to the kitchen, determined to learn what she could by discreet questioning.

He rose, and paced up and down the room. Then with a changed, softer manner he sat down near her, saying: "Let's not talk of death and partings"

What Has Gone Before

AS EUGENIA sat before the fire early one morning during a terrific storm which swept across the island on which she lived with her aunt and two old servants, the doorbell pealed. The unexpected guest was a man, evidently ill and weak from exposure. She welcomed him. When he was warmed and had eaten breakfast, he started to leave, but fainted at the door. The servants took him to Eugenia's dead father's bedroom, and left the girl musing on the stranger's mystery and charm.

"Sam, have you given the gentleman everything he needs?" she began.

"I should say he has, Miss 'Genia," Liza answered. "'Pears like that strange gen'leman's got ole Sam hyp'tized. Somep'n mighty strange 'bout that man coming in from nowhere. I guess Sam'd give him the shirt off his back, 'cept that it don't 'mount to nothing nohow."

"How about hairbrushes, Sam, and things of that kind?"

Tactfully removing a wad of tobacco from his mouth to his wrinkled black hand, Sam replied:

"Yes'm; I done found some for him. He said he didn't have nothing of that kind, so I took those from the north guest-room."

"But he has a valise?"

"Jes' papers in that, he said. Must be mighty particular papers too, 'cause he's mighty fussy about that there bag. First thing he said when he woke up. 'Where's my bag?' he said right off. I certainly think he's a mighty fine gen'leman, though—don't take no stock in what ole Liza says about bad luck a-coming to the house from the war, 'tall. I can look after the gen'leman, Miss 'Genia—won't need to be no trouble to you if you'll let him stay."

"All right, Sam," she assented, her heart heavy. "For the present I suppose he must stay."

She spent the rest of the afternoon among her roses, trying not only to repair the damage which the storm had done to them, but also endeavoring to regain through their beauty and fragrance something of her customary tranquillity. She loved these flowers so that to her they were not inanimate things, but friendly personalities, which usually gave her comfort and happiness.

To-day they did not bring her solace. It was not only the mystery which surrounded her visitor, but her knowledge that this man who called himself Carl Stackpoole had a dangerous quality of fascination which set him apart from other men.

Determined not to think longer of his sinister inconsistencies, she picked the most beautiful buds of her favorite pink roses and carried them up-stairs to her aunt.

MISS BURR, propped up in pillows, was busily reading the Savannah newspapers, which had just come. Since the mail was brought over from the village across the bay only twice a week, it assumed the importance of an event; now, however, she dropped the papers and spoke petulantly to her niece:

"It does seem to me, Eugenia, that you and the servants have completely forgotten me in your mad desire to take care of that unknown man."

"I've looked in twice before, Aunt Sarah, but I didn't come in because you were asleep."

"Asleep! Why, Eugenia, you know I never sleep in the daytime, even after such a miserable night as I had last night. I may have closed my eyes—I have one of my bad headaches, just because Liza was so busy waiting on that strange man that she couldn't bring me my breakfast."

"His name is Stackpoole, Aunt Sarah—Carl Stackpoole."

"Humph!" She picked up the paper and put it down. "Stackpoole, is it? I'm sure I never heard the name before. Not that it matters to me of course—*I* didn't ask him to come in; *I* didn't take him into the room where your poor father spent his last days; I wasn't even consulted about it."

There being no reply to this, she changed the subject.

"Eugenia, I've just been reading in the paper that the Stepham—that submarine destroyer named for your father—has disappeared."

"Gone down, you mean? Been sunk?"

"No one knows. The item in the paper merely said that it was considered one of the finest of the new boats we had, and that no one could learn anything of its whereabouts now. Dear me, how terrible this war is! And just as I was finishing those mufflers for those poor sailors, too. Not that I ought to knit, with my rheumatic fingers, but since the boat was named for your poor father I felt I ought to. And now what am I going to do with all those mufflers?"

For an hour Eugenia sat beside the bed, listening enough to her aunt's comments [CONTINUED ON PAGE 43]

Caring for the Early Lamb

By Daniel Prowant

I HAVE been in the habit of breeding for February lambs for some years past, and believe that early lambs pay better than later ones, provided the owner is willing to give them a little extra care.

Many a zero night I have kept the fires burning and visited the sheep pen every hour, so that no new-born lambs would be frozen to death. As for the success of this plan I can only say that in the last three years I have not lost a single lamb that was born alive.

After I notice symptoms of lambing I do not leave until it is over and the lamb has fed and seems comfortable. I do not believe that if good quarters were provided, and the ewe got only one lamb, many lambs would be lost, even in the coldest weather, as the ewe can care for her lamb better than any man, if she chooses to do so.

When twins are dropped, there is often quite an interval when the first lamb is neglected, and here is where the owner will need to get busy with a burlap sack and assist in drying the lamb and keeping it warm until the mother can give it her attention.

Unless it is actually necessary to interfere, I think that often more harm than good results from needless meddling. Also, I never take the lambs near the fire and away from the ewe if it can be avoided, but at times I have had to do so. I personally have never thought much of the plan of immersing a chilled lamb in warm water, as is often recommended.

My idea is to get the lamb dry rather than wet. If necessary to use artificial warmth, I simply take the lamb near the fire and rub it lightly until warm and dry, or nearly so. As soon as possible it is placed with the mother.

Just as soon as lambs show a disposition to eat they should be encouraged to do so. Silage is positively the best feed for sheep and lambs I have ever used.

Lambs should have a little pen where the old sheep cannot come. In such a pen I locate their feed boxes.

I find no harm in feeding the lambs corn fodder, bright clover hay, chop feed, or wheat bran. When silage is fed it must not be left in the trough to sour after the lambs have eaten.

Sudan for Hay

By Preston Smith

SUDAN GRASS can be grown for hay or pasture by those farmers who cannot grow alfalfa. Sudan grass is adapted to practically all types of soil except those very wet or poorly drained, extremely alkali, or unusually sandy. Sudan grass will not compete with alfalfa on land where alfalfa will grow well. The grass will be profitable in those sections too dry for any crop except sorghum.

Sudan grass, which belongs to the sorghum family, is adapted to the same conditions as kafir, milo, or feterita. Sudan grass will make two to three cuttings of hay; if pastured, it will give good grazing throughout the season.

Two methods of planting are used: one is that of planting in cultivated rows, and the other of sowing with a broadcast seeder or drilling with a grain drill. If the seed is planted, 2 to 4 pounds to the acre is used; but when drilled or when sown broadcast, 15 to 25 pounds to the acre is required. Drilling or broadcasting is the better way to plant this crop if it is to be used for pasture or hay.

As a pasture grass Sudan grass is just coming into popularity. It will pasture more grass to the acre than a native grass. The feeding value of Sudan grass is not equal to that of alfalfa, but is much higher than that of prairie grass.

Poisoning from Sudan grass is rare. A large acreage was pastured in 1917, but only a few cases of poisoning were reported in the United States. As a hay crop Sudan grass is excelled only by a leguminous crop such as alfalfa or clover. In a good season three cuttings may be had, yielding together 2 to 4 tons to the acre.

Some farmers sow Sudan grass around the alfalfa field in places where the alfalfa has failed to make a stand. The grass can be cut every time the alfalfa is cut, and give good hay.

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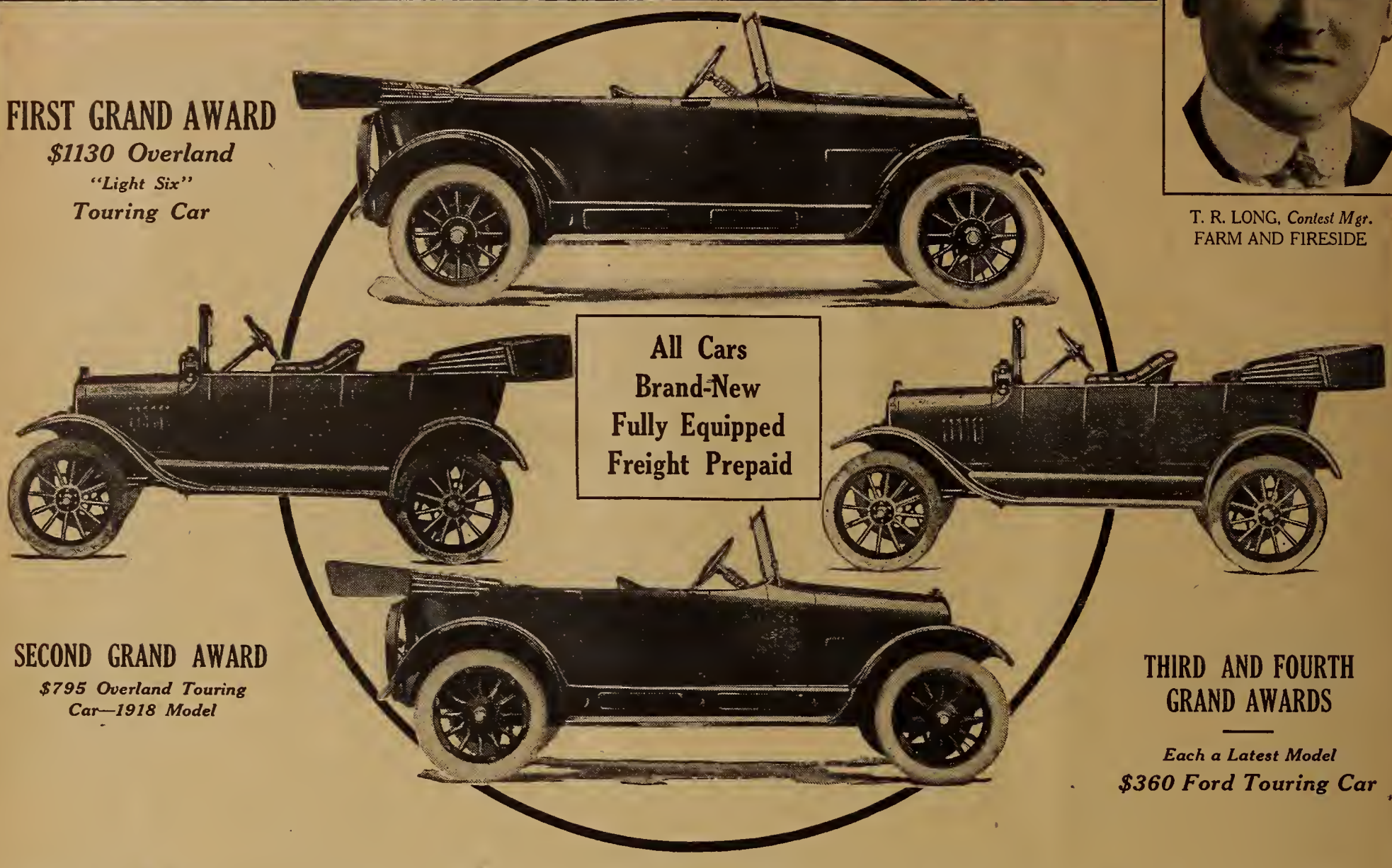

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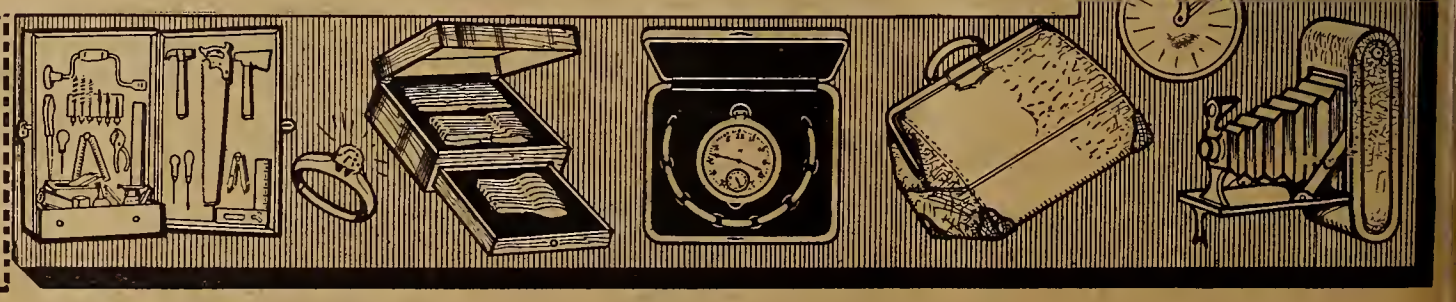


Worthy of the Flag

By MAUD G. BOOTH

EVERY boy in John's room sat very still. Miss Lee was choosing the boys that were to take part in the flag drill. On George Washington's Birthday the children were to give an entertainment, and the flag drill was to be the best part of all the exercises.

"I must have only the boys that always stand straight," said Miss Lee. "No one should ever carry the flag unless he stands very straight." Then she chose twelve boys. She chose Howard, who lived near John, but she did not choose John.

How disappointed he was!

"Maybe I never thought much about standing up straight, though, when I carried the flag," he said to himself.

That afternoon all the boys that had been chosen for the drill stayed after school to practice. John stayed too. He and Howard lived a long way from the schoolhouse and they always went home together.

"How I wish I had been chosen too!" thought John as he watched the boys drill. "Well, I can have the fun of practicing, anyway."

WHEN he reached home, John took out his flag. He unrolled it very carefully; then he began to drill as he had seen the boys do at school. Miss Lee had counted when the boys drilled, so John counted, very slowly: "One-two-three-four; one-two-three-four—"

"Let's see," he said to himself, "what did they do next?" He thought and thought. Suddenly he thought of something else too, and his face grew very red. "Ugh!" he exclaimed. "See how I am standing! As crooked as an apple tree!"

He rolled up the flag and wrapped the paper around it. Then he carried it into the house and put it away. He found a stick about as long as the flag and practiced with that.

The next day when the boys drilled, John watched them more closely, and after he went home he practiced again with his stick.

So he drilled every day. Sometimes Howard came over, and they practiced together.

One night, just before John started to practice with his stick, his little sister said: "Johnnie stands straight all the time now; doesn't he, Mother?"

"Do I, really?" asked John.

"Yes," answered his mother, "and you are growing tall very fast."

They did not know how glad John was. He went up-stairs and brought down his flag. He was sure, now, that he was straight enough to carry it.

On the day before the exercises one of the boys said: "Miss Lee, Arthur Chase is sick. He cannot be in the flag drill."

"Oh, Miss Lee," said Howard, "John knows all the drill. May he take Arthur's place?"

That afternoon John practiced with all the other boys. "You do it well, John," said Miss Lee. "You stand as straight now as anyone. You may take Arthur's place to-morrow."

So John took part in the drill after all. He was glad that he could do something on Mr. Washington's Birthday, but he was even more glad that now he remembered always to stand straight enough to carry the flag.

In the Spy Net

[CONTINUED FROM PAGE 40]

to appear to be attentive, but really busy with her own thoughts. No matter in what direction they might take her, however, always they returned to the man down-stairs, and to the name he had given her and the initials which contradicted that name.

After dinner that evening she knocked at his door.

"Come in!" he said.

As she stepped into the room his dark eyes met hers in an expression of gratitude and admiration.

"Why are you so good to me?" he asked. "It's just like being in a beautiful dream—this big restful room, filled with the perfume of these lovely roses, and—you. Mostly you."

She could not be offended, for he was obviously sincere, and his manner was not that of a man flattering a woman, but rather that of a person expressing his appreciation in the most natural way. Eugenia, partly because of her lack of vanity, and partly because she had always been her father's companion and through him had known older men better than she had known girls of her own age, had an attitude toward men of frankness and comradeship which enabled her to meet them even in these unconventional surroundings without self-consciousness.

Now as she talked to Stackpoole she spoke of impersonal things—of politics and of the war—quite as an intelligent man might have.

Perhaps he saw how she hungered for

[CONTINUED ON PAGE 46]

New Puzzles

Cost of Oats

I bought a horse for $26, and after paying for its keep sold it for $60. That looks profitable at first glance; nevertheless I found I had lost just half of his cost price and one quarter of the cost of keep. How much did I lose on the deal.

Answers to Puzzles

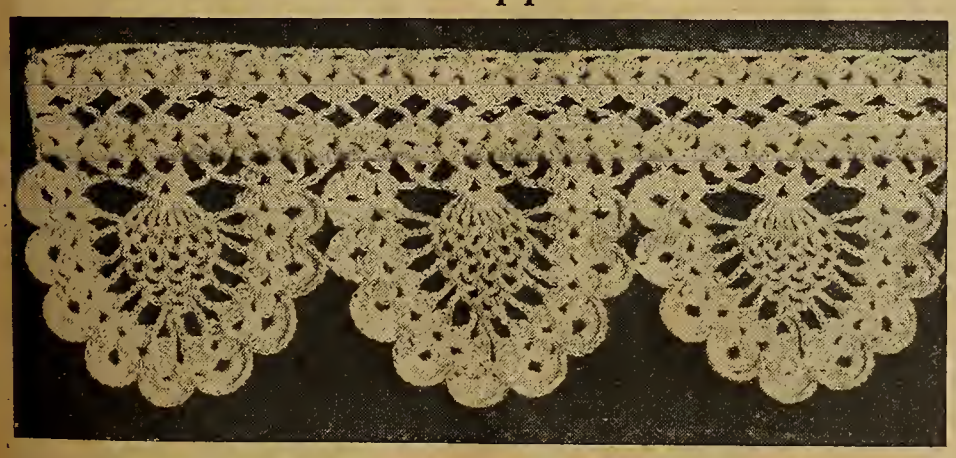
Puzzles Printed Last Issue

Man in the Landscape

The professor's story is made complete by inserting the following words in the blank spaces:

Brow, head, bosom, foot, arms, neck, face, teeth, waste (waist), finger, hand, soul, bones, sinews.

New Pineapple Lace



THIS clever design is appropriate for almost any place where a bit of hand lace is needed. It is especially pretty for doily sets, towels, and for trimming underwear. For directions send four cents in stamps to Fancy-Work Editor, Farm and Fireside, Springfield, Ohio. Order FC-103.

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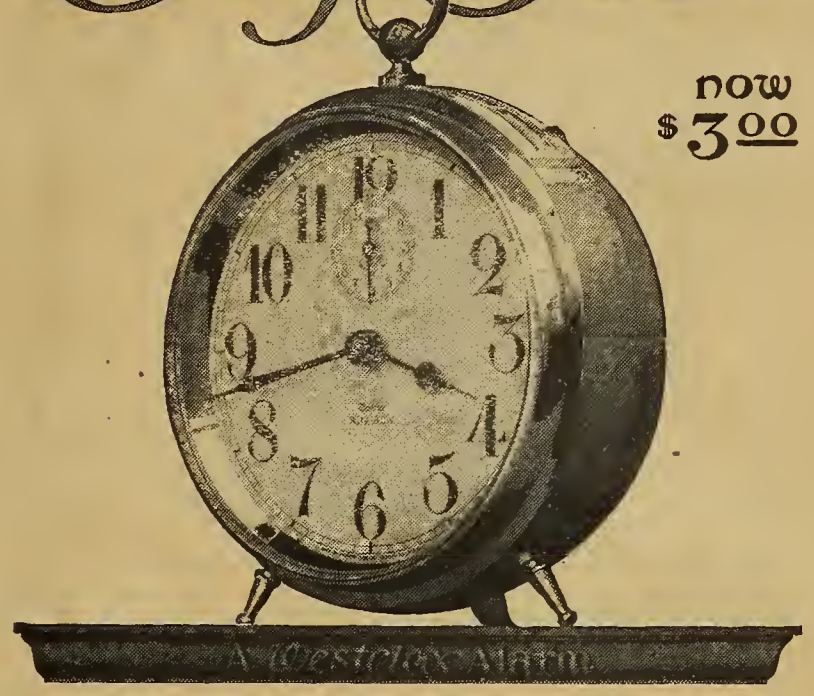

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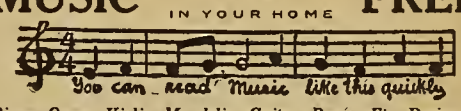

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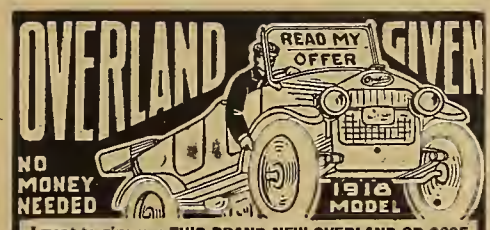

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A Nation on Rations

Cooking to Uncle Sam's Order for the Sake of Victory

By RUTH M. BOYLE

She dried rhubarb in her oven

"IF YOU can't take up arms, take up a hoe, a needle, a skillet for your country."

That is the call the women of America heard and have tried to answer during the nine months we have been at war with Germany. Almost immediately came the cry to save certain kinds of food—wheat first; then, later, sugar, fats, meat. The response was wonderful. A whole country raised vegetables. Mrs. American Woman hunted up the secrets of her pioneer grandmother and learned how to dry vegetables, rhubarb, fruits, in drying trays or in her oven. She learned how to can. In some cases she did not follow the instructions accurately, and the canned vegetables spoiled. The experience was not wasted, however, because this season she will avoid the mistakes of the last.

Meatless Tuesday and wheatless Wednesday have no terrors for the woman who has in her card cookbook sections marked "Meat Substitutes" and "Liberty Breads." We are learning more about proteins and carbohydrates and balanced rations for people than we ever dreamed of doing. We know now that meat is unnecessary when beans are served, because both meat and beans supply large amounts of protein; we have learned not to serve potatoes and rice or potatoes and macaroni at the same meal, and we are learning to omit bread when we eat large amounts of other starchy food.

I was visiting the home of a dry farmer away out in the new country of the West, far from a railroad. At dinner the youngest child, four years old, was sprinkling his baked apple liberally with sugar and incidentally spilling the sugar all around the dish.

"Philip," said his mother, "if you waste sugar that way, Brother won't get any."

"Then I won't eat sugar," said Philip, his eyes very wide as he thought of wonderful big brother, away with the soldiers, having to get along without sugar.

That was last summer, and the message had already found its way to practical working out in this remote Western home.

"One of the hardest lessons I had to learn," a Minnesota housewife said to me, "was that patriotic housekeeping no longer meant merely *the most economical* housekeeping. War breads might cost more than wheat bread, meat substitutes might be more expensive than meat, but for the sake of our soldiers and sailors and our overburdened allies we must *use substitutes regardless of cost.*"

The whole nation is learning that lesson, and learning that no matter how much trouble it is to make good barley bread or to prevent the waste of fats by making soap at home—*it must be done for victory.*

Out in Washington State I heard how one woman went about it to change the cooking and eating habits of the whole State. Her story with variations is that of the leaders in every State in the Union. The State club leader in Washington was called to the national capital, and Mrs. Elizabeth Jones was left to organize her State for war emergency work.

In the pig, sheep, canning, gardening, and poultry clubs of which she was the head she found the nucleus for her work. The gardening and live-stock clubs would increase production, while the canning and drying clubs would help conserve. Bread clubs would learn the new cookery and teach it to a State. To do this work effectively she wanted to enroll every farm boy and girl in some club, and to teach every woman how to can cheaply and efficiently. The State must be divided into districts, supervised by a trained leader; each county and rural district required the intelligent direction of a club expert. But the thousands of women, boys, and girls drafted for the war commissary work needed officers, trained leaders who had to be provided with salaries and expense money. The story is a "House That Jack Built" one, for Mrs. Jones had to get money to get leaders to get people enlisted in her conservation and production army.

Nation, State, and county contributed, and she got the money. The county school superintendents loaned their automobiles, and by the system of "boarding around" the leaders were entertained in local homes by farmers' wives interested in the movement. At first there weren't enough trained leaders to go around.

"All right," said Mrs. Jones; "we'll make leaders."

There are two vocational summer schools in Washington—one at Pullman and the other at Puyallup. Mrs. Jones drew up six and four weeks' courses designed to fit men and women at these schools for immediate leadership in food production and conservation. Students enrolled from all over the State, and there were no slackers in the classes, for the work outlined kept them busy fourteen to sixteen hours a day.

The girls who enrolled in gardening put on overalls and made a hotbed. They took hammers and saws and made a cold-frame. They dug up the ground and seeded their beds. Then these prospective leaders were sent out to weed and water and hoe gardens already sown. They routed the insect enemy with a hostile spray, harvested crops, sorted products for market, and canned them for use. They learned to arrange and display products and judge them at a fair. In the poultry class they followed the transformation of an egg to chicken in a can.

Housewives Volunteer as Teachers

IN Cheyney, Washington, at the normal school, she made graduate canners of a class of girls; gave a daily demonstration before the assembled student body, and taught the faculty how to can. The president of the school put on an apron and canned beans, while the teacher of Latin and Greek, a scholarly gentleman, was delighted to find that he could put up edible peaches. The faculty were so proud of their practical knowledge that they proceeded to put up pickles, preserves, jellies, peas, beans, and beets enough to supply the dormitories and faculty homes for the winter.

The Volunteer Housewives were enthusiastic women, trained by the club leaders, who volunteered to give up three days a week to teaching other women who had not been able to attend the classes. Thus every woman, no matter how isolated or how busy, could be reached. At the first meeting at which Mrs. Jones appealed for volunteer housewives, only two responded. Mrs. Jones, disheartened, told the sympathetic county agent about it.

Cabbage for patriots

"Let's go to my office and growl," he said.

But she soon found she had no time to growl. She was kept busy answering the telephone calls from women who had gone home, talked it over with their families, and decided that they could give up half of each week to their country's service.

The result is that the women of Washington are well organized, ready for Uncle Sam's orders as to new dishes and new menus. They are thinking for themselves, too. One housewife told me:

"I found it hard to keep one day entirely wheatless, but instead we are eating wheat bread at one meal only, substituting cereals in the morning and corn or rye bread at luncheon. In the end this plan means that we are saving a much larger amount of wheat than if we kept one wheatless day a week, and we like it better."

With spirit like this at home, is it any wonder that the men who are going to fight feel sure of victory?

The other day I was talking to a country doctor's wife, and she happened to mention a new discovery.

"Just imagine," she said, "I have heard of a wheatless and fatless pie-crust recipe! I'm going home to try it. Listen!" She read from a slip of paper:

"CORNMEAL PIE CRUST—Grease a pie tin. Cover it with dry cornmeal by shaking with a rotary motion. Have cornmeal covering the pan to a depth of one sixteenth to one eighth inch. Fill with pie mixture. Bake. This crust works well for pumpkin, squash, and custard pies.

Here in America we fortunately have never had the fourth meal called "tea" served in all English homes from the cottage to the mansion. It has been a tug for English women to give up the tea hour, friendliest of all their meals, and it has been even harder for them to learn to use tinned corn and cornmeal,—maize, they call it. But they have done it. Their first efforts probably resulted in soggy johnny-cake, but they have kept on until now they are able to make a palatable dish.

We have always used and liked corn. Oatmeal, barley, rye, and rice are old friends. All we have to do is to use them oftener. We have not been asked, as German women have been, to use unpleasant and non-nutritious foods to satisfy the healthy appetites of our families.

Who can protest against a more extended use of peanut butter, for example, as a method of saving the much-needed lard and butter? Who does not like dates, figs, raisins, and delicious honey? Yet, more extended use of these natural sweets will release sugar for France, where for two years the people have not had enough sugar. Is there any sacrifice about a meatless meal when fresh and salt fish, poultry, eggs, oysters, or cheese may be eaten? Of course not, and the meatless meal will make possible plenty of meat for our men.

In Europe food regulation has meant hardship; in America it means better cooking, less waste, and a more varied menu. We are a nation on rations—yes, but good rations, and we are voluntarily and enthusiastically rationing ourselves.

Mrs. Jones says: "Honey and syrups instead of sugar will make victory just as sweet—and bring it sooner"

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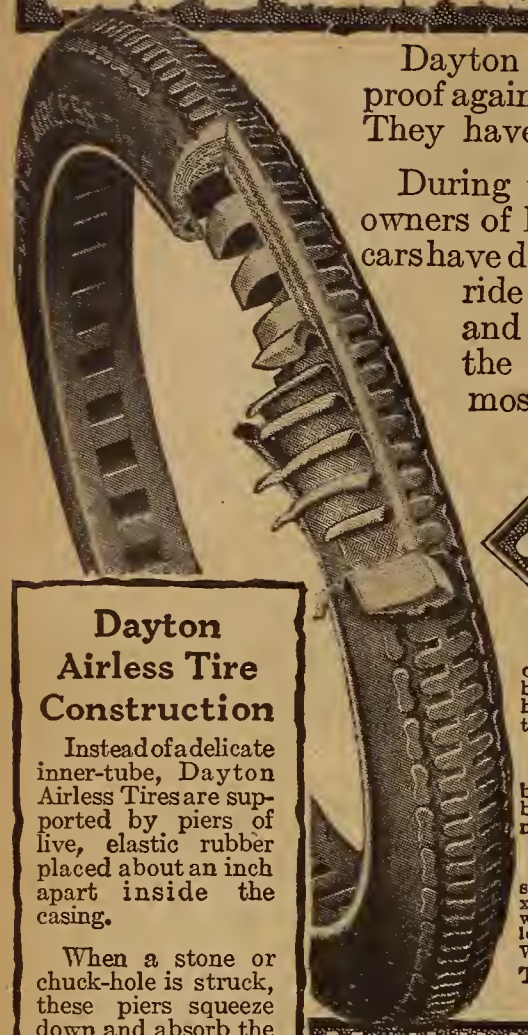

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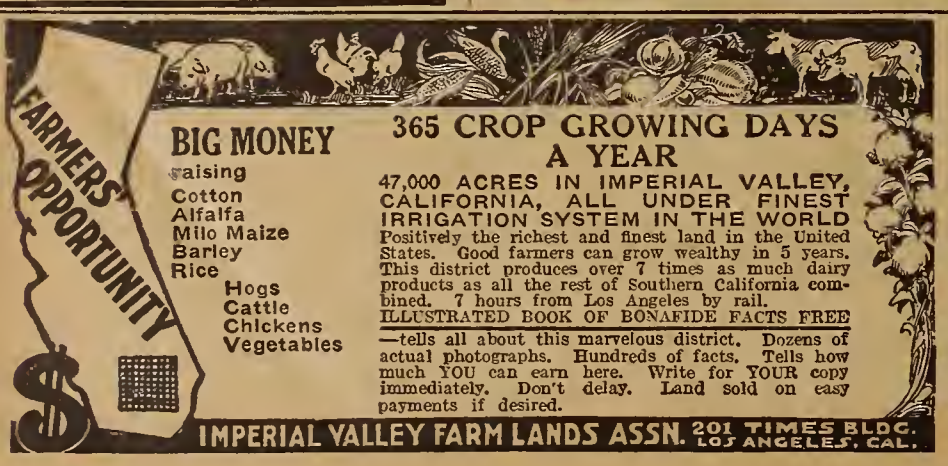

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In the Spy Net

[CONTINUED FROM PAGE 43]

news of the outside world, for presently he said:

"Isn't it lonely for you down here?"

"Yes, it is," she answered simply. "But Father put all of his money into this island—navy officers haven't much, you know—for he wanted, after he retired, to live near the sea. When he was alive I didn't mind it. We traveled in the winters sometimes, too."

"Must you stay here now?"

"I don't know. During the first few months after his death I had so many things to decide that I did not consider selling the place. Then we went into the war, and I thought perhaps the Government would buy it, as it bought those other islands south of here, for experimental naval stations. But they did not, and no private person is buying estates of this kind just now. We own the entire island, you see—almost two miles wide and four long."

"It would make a wonderful convalescent hospital for soldiers."

"No, it is too far away from the ports where the transports land. Speaking of transports, I understand that the destroyer Stepham has disappeared."

"Good God!" he cried.

His excitement astonished her.

"It does not necessarily mean anything," she said. "It was only a newspaper account, saying that no one could locate it. That's not to be wondered at, for, of course, no one would ever hear of it if it were put into active service."

The flush which had come into his pale cheeks made her assume that she had stayed too long, so she said good night.

As she went up the stairs to her own room, Eugenia was astonished to reflect upon how little she had thought of her guest's startling discrepancies while she had been talking to him. It was certainly true that he had great charm; and in spite of some mysterious quality of personality, she had almost forgotten her suspicions during the past hour.

As days passed this became more and more true. When she was alone the girl pondered over the mystery of his arrival, of his reluctance to see a doctor, of his vagueness of plans, and most, of course, over the deception in regard to his name; but such was his magnetism that when she was with him she thought of little else than her delight in the companionship—in fact, these were the happiest days she had ever known.

ON THE fifth day after his arrival he insisted upon getting up and dressing, and when he saw Eugenia he asked if he might call on Miss Burt.

"I'm sure I don't see why in the world he wants to see me," said that lady when her niece conveyed his message to her. "Get me my hand mirror, Eugenia. I'm sure I must look a sight. I had one of my bad nights again. Get my other lace cap, dear—the one with lavender ribbons."

Having adjusted her pillows, her wrapper, and her best cap, Miss Burr announced again that she couldn't see why in the world that man wanted to see her, but that she was now ready.

Eugenia sent down word by Liza, who for some time had kept silent about her "premotions," and in a moment they heard Stackpoole's footsteps.

Miss Burr surveyed his tall, straight figure critically as he came toward her bed, and Eugenia could see that she was favorably disposed toward him at once.

The girl herself had never seen him at such an advantage. Apparently reading Miss Burr's prejudices and preferences at first glance, he displayed courtly consideration for them He talked to her in such entertaining fashion that when he rose to go, at the end of half an hour, she insisted that he stay longer; and this in spite of the fact that the Savannah papers, which had been delayed, had just arrived.

When at last he started down-stairs, the invalid, without even glancing at Eugenia, said in her sweetest voice:

"Now, Mr. Stackpoole, you are not to think of leaving us for at least a month. The climate here is just as healthy as it would be on the island to which my niece tells me you were going, and it will be our pleasure to have you here. Stay here during your convalescence."

Stackpoole, apparently touched by this generous hospitality, bowed.

"I assure you that the pleasure I derive from being here is so great that I would not dream of leaving were I sure of not being in the way."

"Then it is settled," said Miss Burr.

When the door closed behind him she turned to her niece with enthusiasm as genuine as it was rare.

"He is charming!" she exclaimed. "A thorough man of the world, and such attractive manners! He reminds me for all the world of poor Charlie Daingerfield—you've often heard me speak of him, Eugenia?"

The girl nodded. Charlie Daingerfield had been the one romance of her aunt's life. He had been thrown from his horse, dying instantly, shortly after he and Miss Burr had become engaged, and to compare anyone with Charlie Daingerfield was to set upon him the seal of superlative approval.

After that Carl Stackpoole paid at least one visit a day to Miss Burr, and daily she sang his praises. It seemed to give him pleasure to devise means of pleasing her, and under his attentions she lost much of her querulousness.

EUGENIA determined to put aside all disturbing factors and live only in the present. Perhaps the greatest cause for her ever-increasing joy lay in her surety that he shared her zest for living. It was unspoken, but the expression in his dark eyes when he looked at her was enough.

Even Liza seemed to have partially recovered from her fears, and Sam fairly worshiped the "strange gen'leman." Stackpoole declared that he was being spoiled.

"But it really is one's duty to get all the joy there can be in life, isn't it?" he said one evening more than two weeks after he had arrived, as they were sitting in the library. Then thoughtfully: "For life is so uncertain."

"I have never thought of it as uncertain," she answered.

"For men it is. Think of the thousands who are dying in Europe!"

"Oh, in Europe, yes. But I must confess that in spite of America's participation the war seems remote to me."

"I wish that it did to me!"

He rose and paced up and down the room. Then with a changed, softer manner he sat down near her.

"Let's not talk of death and partings," he said, apparently unable to express that which hovered on his lips. "How fragrant your roses are!"

"And yet the odor of your cigar improves their fragrance for me. I suppose partly because I associate it with Father—"

"And what is the rest of the reason?"

She tried to speak without displaying the self-consciousness which she felt.

"Oh, the rest is—that it's very nice to have you here." She got up suddenly. "I must find my knitting needles—I've almost finished my third sweater."

The rest of the evening passed quickly, filled with the impersonal interchange of ideas and thoughts which had made his presence so delightful to her. When he had first come he had startled her, now he often puzzled her by his long silences, and his sudden changes from the whimsical, boyish mood she liked best to one of gravity; but, no matter what he did, he never failed to interest her; never had anyone attracted her as he did.

Shortly after ten she rose. Together they walked to the foot of the stairs. She held out her hand, but instead of taking it in his own he pressed it to his lips.

"Good night, Eugenia," he said softly. "You are the dearest thing in the world! I love you!"

Her heart went out to him in a flood of tenderness, but she did not speak, nor did he seem to expect it. After a moment she went slowly up the steps.

She wanted to be alone in the darkness. She sat down by the open window and loosened her masses of bronze-brown hair. As she looked out at the silvery moonlight, all doubts and misgivings were completely forgotten.

Suddenly she caught her breath. Moving cautiously in the shade of the vines and trees was the crouching figure of a man. She fancied that he glanced toward her window, then apparently satisfied at the darkness, moved boldly into the light, in order to reach the path which led to the sea.

As the light struck the figure she saw that it was Carl!

[CONTINUED IN NEXT ISSUE]

A Liberty Loan "Camp"

By Emily Rose Burt

THE members of a high school who wanted to earn money for a school Liberty bond gave a successful and original affair.

Big white posters bordered with red and blue announced in large letters that Camp Comenbuy was open to visitors between four and eleven o'clock on a certain date. A soldier standing at attention made the emphatic announcement that the proceeds were for the Liberty Loan.

Of course everyone who wasn't on the committee was particularly curious to see what the "camp" was like. It was held in a big hall, and upon entering the door, which was guarded by Boy Scouts in uniform and who took the admission fee, a whole cantonment of khaki-colored tents presented itself. From the top of each waved an American flag. The flap of each tent was raised, and across the opening was an improvised wooden table upon which were displayed the objects for sale.

One of the most popular tents was the popcorn one, selling popcorn balls, each wrapped in brownish-yellow oiled paper and tied with narrow tri-colored ribbon, buttered corn in red bags tied with blue and white twine, and funny popcorn men and beasts.

Next to that was the War Candy tent where molasses, brown sugar, and maple sugar candies were in evidence, dates stuffed with peanuts, peanut brittle, and other confections not calling for white sugar. They were sold in boxes covered with khaki-colored wrapping paper and tied with red, white, and blue paper tape or twine.

A tent labeled boldly "War Fare" proved to hold home baking of the Hoover variety—war breads, war cookies, and war cakes. Gingerbread soldier boys were a feature of that.

By no means all the space was given to tents for edibles. The Knitting tent was very attractive with all sorts and sizes of bags. Knitting bags of pink and blue flowered cretonne for little girls were especially featured. Knitting needles, yarn, and all the little knitting conveniences were sold at a neighboring tent. They could be, of course, combined with the bag tent.

THE Overseas tent proved popular with the young girls, for in it were the many little gift suggestions which are so appreciated by soldiers and sailors. There were flat leather picture frames, pocket diaries, pocket cigarette lighters, folding chess and checker boards, sewing kits, indelible pencils, writing paper, and razor blades.

A Boy Scout with a tray of red, white, and blue rosettes at five cents each made money by circulating among the crowd, and there was a remarkably fascinating grab which everyone patronized. A pretty girl with "an old kit bag" was understood to sell the "troubles" packed in it for ten cents and a smile—the smile was insisted on and was never withheld.

A very popular tent was designated on the outside as the Patriotic Picture Gallery. Admission was five cents, and inside were arranged photographs and snapshots of all the local soldiers and sailor boys who had gone to war. There were also prints of our country's famous generals and admirals—from Washington to Pershing,—duplicates of which could be obtained for a small sum each, if desired.

At one end of the hall a canteen where visitors could purchase refreshments was very popular. Behind a log counter in regulation style were arranged the viands served by white-capped "cooks." The foods served were supposed to be soldiers' fare—vegetable soup, baked beans, escalloped salmon, escalloped potatoes, cornbread, and coffee. Each dish cost a certain sum and all patrons made their own choices.

A popular booth was curtained off by a local music firm, who fitted it up as a spot where one might sit and rest a bit while listening to patriotic records. Both old and new marches and songs were included, and the records were sold to those who wanted them.

During the evening a patriotic program was rendered, which was fully worth the price of admission.

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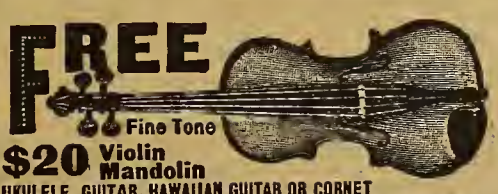
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BAKED HASH—Put all bits of left-over meat of various kinds through the grinder; add half the quantity of chopped potatoes, one onion chopped fine, and salt and pepper to season. Mix well; put into a buttered pan and place in a hot oven. Bake until nicely browned, then serve at once. It is very nice to use milk rather than water in dampening this hash.

BAKED SAUSAGE WITH MASHED POTATOES—Peel the potatoes and cook in salted water until done; drain, and mash well, seasoning with milk and a little butter. Have ready a greased baking dish. Mold the sausages into small cakes and fry until tender and well browned. Line the baking dish with the mashed potatoes, add a layer of the sausage cakes, cover with the potatoes, and set in a hot oven until thoroughly heated through and a golden brown on top. Serve at once in the dish in which they were baked.

BEEF LOAF WITH TOMATO-CELERY SAUCE—Three pounds of beef, from the lower round, a good-sized piece of suet, put through the grinder twice; add two small onions chopped very fine, three well-beaten eggs, two tablespoonfuls of chopped parsley, or a little minced sage may be substituted for this, a cupful of finely rolled bread or cracker crumbs, three-fourths cupful of milk, and a seasoning of salt and cayenne pepper. Mix thoroughly together, then form into a loaf; pack firmly into a greased square or oblong bread tin, then turn upside down in a greased baking tin, and bake in a moderately quick oven for an hour. When done, stand away until cold. Then cut in thin slices and serve with the following sauce: Twelve ripe tomatoes, four sweet peppers, three heads of celery, two tablespoonfuls of sugar, two tablespoonfuls of salt, three cupfuls of vinegar. Peel the tomatoes and onions and chop separately, very fine. Chop the celery fine, add to the vinegar, sugar, and peppers, and cook for half an hour, then add the tomatoes and onions and boil an additional three quarters of an hour. This will keep indefinitely if sealed in glass bottles or jars. Pass it with the meat loaf.

Everyday Helps

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CLEANING INSIDE WOODWORK—When inside woodwork is washed with soap and water it is usually streaked. Instead, try cleaning it with whiting and it will look shiny and clean. Make a paste of the whiting by adding a little water, and then apply to the woodwork with a dry cloth. When dry wipe off.
E. A., Illinois.

SMOOTH, CREAMY CEREAL — When making cornmeal mush, put the desired amount of boiling water in the mush kettle, add the salt, and remove from fire while adding the cornmeal, but stir all the time. By experience I have found that lumps are less likely to form if done this way. MRS. R. L. C., Ohio.

BANISHING MOLD—When we first moved into the very old house we live in, I had great trouble keeping food from molding in my small cellar and rather damp pantry. Since I have arranged for better ventilation and learned to paint and disinfect both pantry and cellar frequently, I have had no trouble. M. K., Montana.

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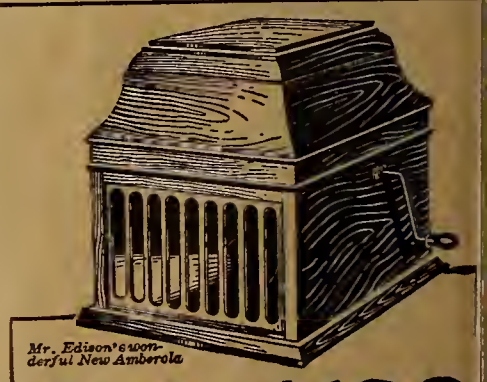

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Looking Your Best

Ways That Keep Your Hands White and Soft

By MARGARET DRUMMOND

IT HAS often been remarked that a lady is recognized by the condition and appearance of her hands, and certain it is that nothing more surely indicates an absence of daintiness in personal care than neglect of the hands and nails, and nothing more quickly stamps a woman as being well groomed than a white, well-kept hand and smoothly polished finger nails. It is not an easy matter in cold weather to keep these active members soft and white and the nails in good condition.

Miss Drummond will be glad to answer questions by personal letters if a stamped and self-addressed envelope is enclosed

Climate has a good deal to do with the general condition of the skin, and hands that have a tendency to redness, roughness, and unshapeliness will have all these defects exaggerated with frosty weather. The busy woman may begrudge herself the half-hour a day necessary to devote to this part of her toilet, but she will find that these minutes are well worth the small sacrifice.

The necessary outfit will cost a little, but good instruments should be purchased in the beginning. A flexible file, emery boards, polisher, orange sticks, cuticle knife, cuticle scissors, and nail scissors are necessary, together with a little red paste, nail bleach, and white nail powder.

JUST before retiring is the best time to give to the beautifying of the hands and arms. Immaculate cleanliness is, first of all, imperative. They should be washed in warm water—never extremely hot or cold—to which has been added a pinch of borax or a few drops of tincture of benzoin. A piece of lemon added to this water is excellent for removing dust and stains, although for some skins a mild soap or almond meal will bring better results. After washing, the hands should be carefully dried and then thoroughly rubbed with a good toilet cream, spread plentifully all over the hand and arm, especially around the base of the nail where the cuticle and the nail join.

After applying the cream, rub the flesh around in small half-circles, pressing deeply but gently, and always rub up toward the elbow. In finishing, draw the fingers straight down from the elbow to the wrist several times. In massaging the hand, after rubbing the cream thoroughly into the pores, gently pull each finger through the half-closed fist of the other hand until you can feel the warm blood pulsing in the fingers and the whole hand looks pink and rosy. The massage should always run lengthwise and the joints should never be sharply pulled or twisted unnaturally.

Giving the final polish

Now get your manicure instruments into play. Begin by shaping the nails with the file. Always preserve and extend the curve and shape of the nail to that of the finger, and trim all rough edges smooth. (Extremely pointed finger nails are not considered beautiful—they are like claws.) Then soak the fingers for a few minutes in a basin of lukewarm water—just long enough to soften the cuticle—and dry with a soft towel.

Clean the nail with the point of the orange stick, being careful to remove every particle of dirt. If there are any stains, wrap a tiny piece of cotton around the stick and dip into the bleach before applying. Touch each spot, and run the soaked cotton under the nail from side to side.

Then loosen the cuticle all around the nail. Lift it up—never push it down and back, as this movement will crack and split the skin—and frequently dip the knife into the water, as this helps to soften the cuticle and makes the work of raising it easier. When it is quite clear of the nail use the needle-point scissors, and endeavor to trim the cuticle all in one piece, otherwise rugged edges and hang nails will result. Be extremely careful about this part of the treatment, as a too zealous use of either knife or scissors may hurt the nail and undo all your work. Press the skin at the bottom of the nail gently back, so that the half-moon shows clearly.

Next apply the red paste. Use very little and, after applying to each nail with the finger tip, rub well into the nails with the palm of the hand, following this with a brisk rub of the buffer. Then dip the finger tips into water and dry thoroughly, as it is impossible to polish a wet nail. With the nail scissors cut off any tiny threads that may be left, and smooth off all rough edges on the nails with the emery board. Dip the buffer into the nail powder, place the center of the buffer on each nail in turn, and rub lightly until the desired polish results—a very high polish ("China finish") is not considered correct these days. A light dip into clear, warm water, careful drying, and a brisk rub of the nails of one hand against the palm of the other and your manicure treatment is ended.

AFTER the treatment it is wise to put on a pair of very loose gloves, clean inside—white chamois ones are splendid, but cotton ones can be used with very good results. Snip off the tips of the fingers and cut a hole in the palms so that the hands will have free ventilation. Use large gloves, so there is not the slightest impediment to perfect circulation—a very important point in the care of the hands. Wear the gloves all night.

A mixture of glycerin and rose water, equal parts, should be kept near the wash bowl, so that a few drops can be applied and rubbed into the hands directly after they are washed each time. This will help to keep them white and soft. For pronounced roughness of the skin a few drops of carbolic acid added to the glycerin and rose-water mixture is highly recommended, and if the odor of this drug is objectionable the addition of a little perfume will remove it.

A celebrated physician recommends lettuce cream for swollen, red, or chapped hands. His formula is: Milk of lettuce, 200 grams; pure glycerin, 50 grams; tincture of benzoin, 15 grams; salicylate of soda, 4 grams.

The first ingredient can be made at home. Use only the large leaves on the outside of the head of lettuce. Pour boiling water over them. Let stand for five minutes, then pour off the water and pound the leaves to paste. Strain through clean cheesecloth or through a jelly bag. This lotion should be bottled and used night and morning.

"Clean hands and a pure heart" are the instructions the Bible gives us, and both are possible to every woman.

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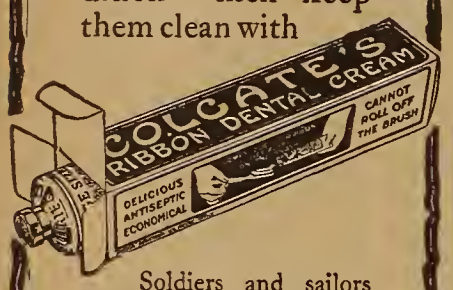

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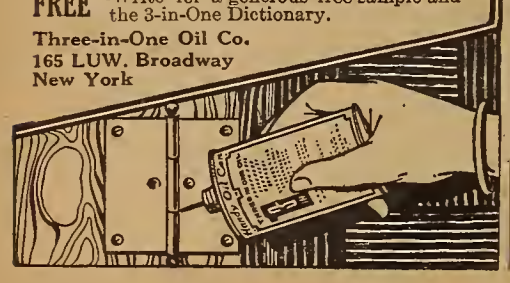


Dress an Orphan French Baby

The bag contains useful little articles for baby's care

Red Cross, the good godmother to thousands of homeless little French children, asks you to help

ALL the world worships a baby. Perhaps that is why, when you ask the Red Cross workers "over there" what is the loveliest side of their work, they answer promptly, "The babies." They are caring for hundreds of homeless little ones whose mothers have fled with them from the war-wrecked regions of France and Belgium. They are clothing and feeding infants whose fathers are at the front. They don't ask for luxuries for these babies. They ask only necessities—plain, warm garments. You have the chance to help.

Knitted or crocheted bonnet

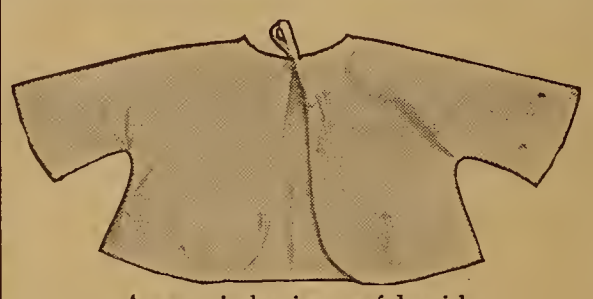
Bootees are knitted or crocheted, or made of Daisy flannel

ALL you need is a heart, some Daisy flannel, and the love of a baby, and you can make the simple garments which the Red Cross is depending upon to protect the tiny *repatries* from exposure. Women's clubs and church societies who prefer to work at their meetings rather than to go to the Red Cross rooms will find the making of layettes especially interesting work. They may also be made at home, so that the woman who cannot leave her house is not barred from this important service.

The representatives of the Women's Bureau who were sent to France to study the question of clothing for refugees have brought back the models for the infant's layette herein described. This is now adopted as the official Red Cross layette for French and Belgian children. These representatives have recommended the adoption of this layette only after careful study and consultation with the heads of the various organizations in France which have been working with the refugees for the past three years. These authorities consider it to be the most practical and economical layette for universal use.

It is urged, therefore, that as soon as practicable this layette be substituted by Red Cross workers for those now being made. Many of these, although very complete, contain articles which are not really needed, and the present limited transportation facilities prohibit the shipment of anything but absolute necessities. All layettes now completed and those in the process of making will, of course, be gratefully accepted.

As it is expected that the layette will be made largely by individuals in their own homes, and as the necessary materials can be secured in almost any store, no special effort will be made by the Bureau of Supplies to furnish them.



A warm jacket is a useful article

Too much emphasis cannot be placed upon using the materials indicated, or only such substitutes as are equally durable and warm. This is important since the garments receive very hard usage. Owing to the coal shortage throughout France, hot water is obtainable on only two days a week, and the laundering is mainly done in village streams and ponds, where the method of cleansing is that of pounding with stones.

The colors used in the layettes should be white, pale pink, and pale blue only, and each layette should be either blue and white or pink and white.

The articles and the number of each to be included in the layettes are:

*DRESSES (2)—Made of good quality Daisy cloth or outing flannel. Thin cotton materials should not be used.

*JACKET (1)—To be worn outside of dress. Should be made of good quality Daisy cloth flannel, or outing flannel; or may be knitted or crocheted.

A cape with hood like this, if made of heavy Daisy flannel, will keep baby warm

*WAISTS OR BRASSIÈRES (3)—Made of white bleached muslin of good quality.

*WAISTS OR BRASSIÈRES (3)—Made of thin white flannel.

*CAPE WITH HOOD (1)—Made of either pink or blue heavy Daisy cloth flannel or good quality outing flannel. A wrapping blanket or a knitted or crocheted blanket, one yard square, may be substituted for the cape if desired.

*BOOTEES (2 pairs)—Pink, blue, or white, either knitted or crocheted, or made of heavy Daisy cloth or outing flannel.

SWADDLING CLOTHS OR WOOLEN BLANKETS (2)—Made of all wool white blanketing, 28 inches wide by 32 inches long, and bound with white muslin from 1 to 1½ inches wide, stitched several times to be quite flat. The binding should be cut on the bias, 2 or 3 inches wide, so that the blanket may be alike on both sides.

FLANNEL BINDERS (3)—Made of white flannel, 28 inches long and 6 inches wide. This is merely a straight strip of flannel, unhemmed. In placing these in the layette they should be rolled tightly and fastened with three or four safety pins.

DIAPERS (12)—White diaper cloth, 20 to 22 inches wide and 36 inches long, hemmed on each end.

UNDERSHIRTS (3)—Woven wool and cotton, long sleeves. These may be purchased, or they may be made from good quality cast-off underwear, if the material is strong and in perfect condition.

BONNET (1)—Knitted or crocheted of pale pink or blue worsted, not too fine. To knit the bonnet, cast on stitches of pink or blue to measure 14 inches, and knit plain for 6 inches. Break off yarn and join on a fine white wool; knit for six inches more, and bind off loosely. Fold the white wool over the colored for a lining. Fold the 14-inch strip, making it 7 inches, and set the 7-inch edges together to form back of bonnet. Run a three-fourths-inch ribbon in and out around the bottom, and leave ends for tying. The bonnet may be crocheted in similar fashion.

BAG OF SUNDRIES (1)—Made of either pink or blue figured or striped muslin and should contain: 6 large safety pins; 6 medium safety pins; 6 small safety pins; 1 cake of soap; wash cloth, either knitted or of bath toweling; 1 box talcum powder; small roll of old linen pieces; piece of flannel or small case containing 6 needles; spool of white sewing cotton and thimble.

Patterns for garments marked with an asterisk can be procured as official Red Cross patterns from the chapters or from the various pattern companies. These patterns are issued in one size only.

Whenever possible, the layette should be made complete before it is delivered to chapters for shipping. Each layette should be wrapped tightly in one of the diapers and pinned securely with several safety pins. Where it is not possible to make the complete layette, the separate articles may be sent in to chapter headquarters. Consult the chairman as to what is needed most.

Completed articles should be sent, if possible, to the nearest Red Cross chapter. When this cannot be done, they should be sent directly to the Red Cross Supply Depot, New York City.

Baby needs plain dresses of outing flannel

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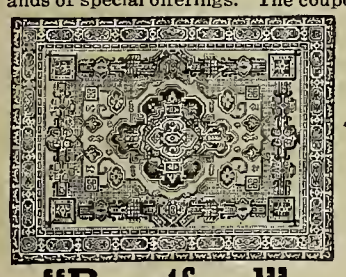

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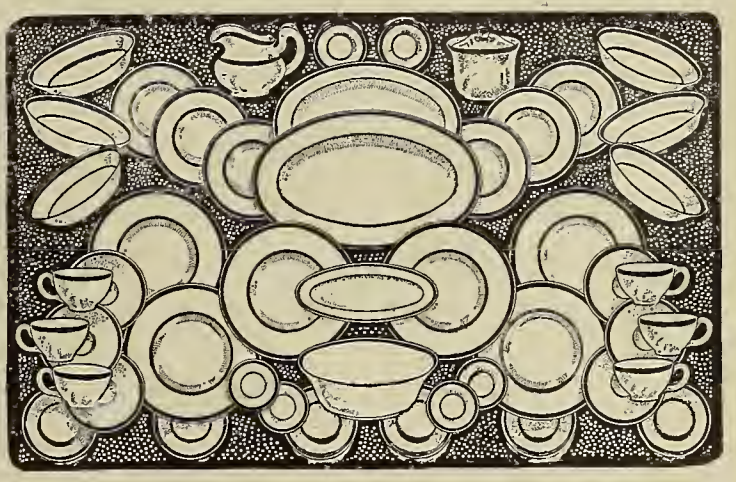

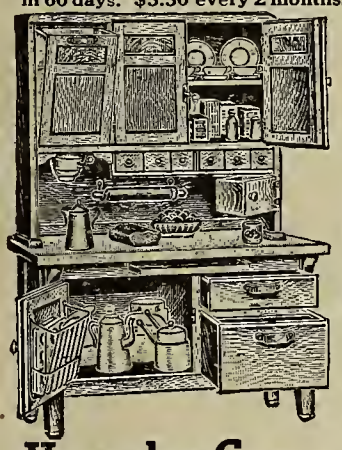

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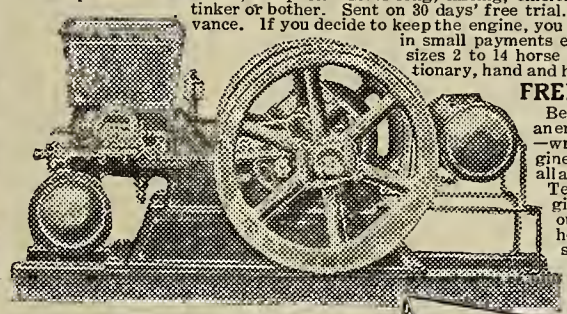

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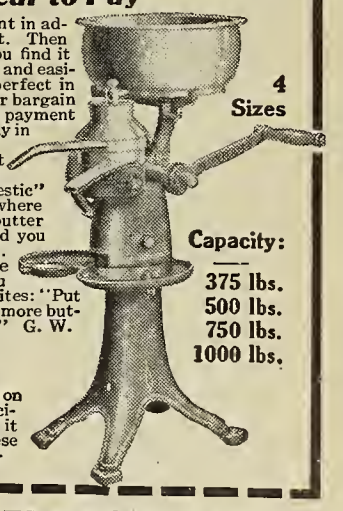

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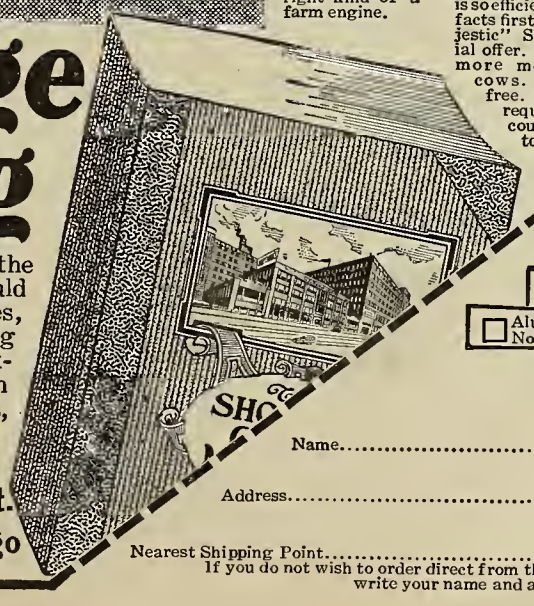

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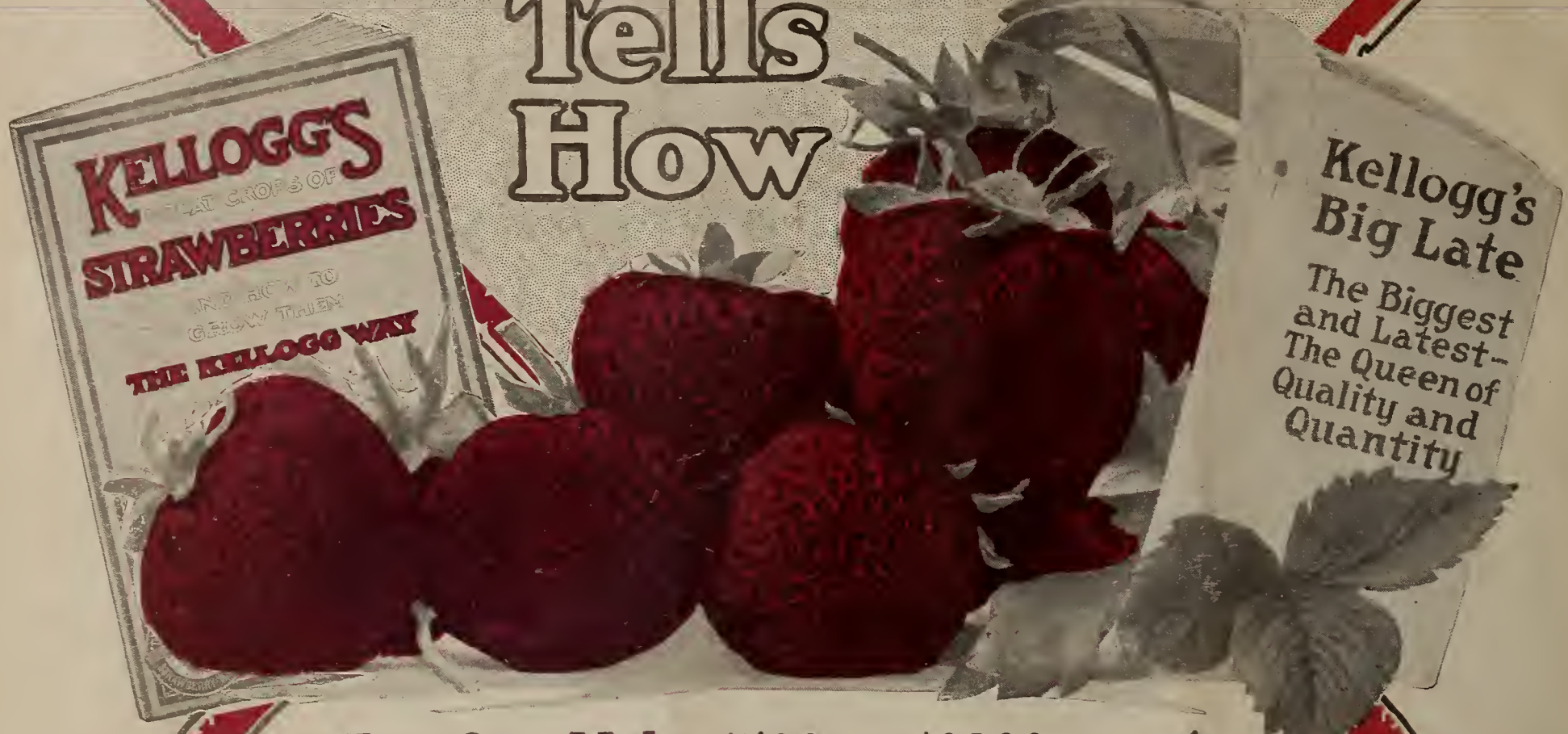

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FARM AND FIRESIDE

The National Farm Magazine

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How I Was Treated in Five German Prison Camps—*By Private Rossiter*

PROVED WORTHY BEYOND QUESTION

THREE distinct tendencies in modern motor car construction were visible in the new models at the recent metropolitan automobile shows.

Briefly, these three tendencies were concerned with more efficient power, lighter car weight, and greater economy of operation.

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Made of high-grade felt, thoroughly water-proofed and surfaced with crushed slate, either red or green, as you prefer. The effect is even richer and more beautiful than solid slate because the particles of slate on the surface catch the sunlight, giving life to the coloring. Laid in strips of *four shingles in one* at about one-fourth the cost in labor and time for wooden shingles. This saving in method of laying, combined with the saving in manufacture, gives you a roof of unusual artistic beauty at astonishingly low cost. Fire-resisting as well.

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Think of a roll-roofing handsome enough for a cottage or home, economical enough for a barn or garage! Think of a roofing that you can lay in a few minutes, with a fire-resisting surface of crushed slate! That's what Barrett Everlastic Slate-Surfaced Roofing means. It's the material that Everlastic Multi-Shingles are made of. Comes in rolls in two colors of the natural slate, red or green.

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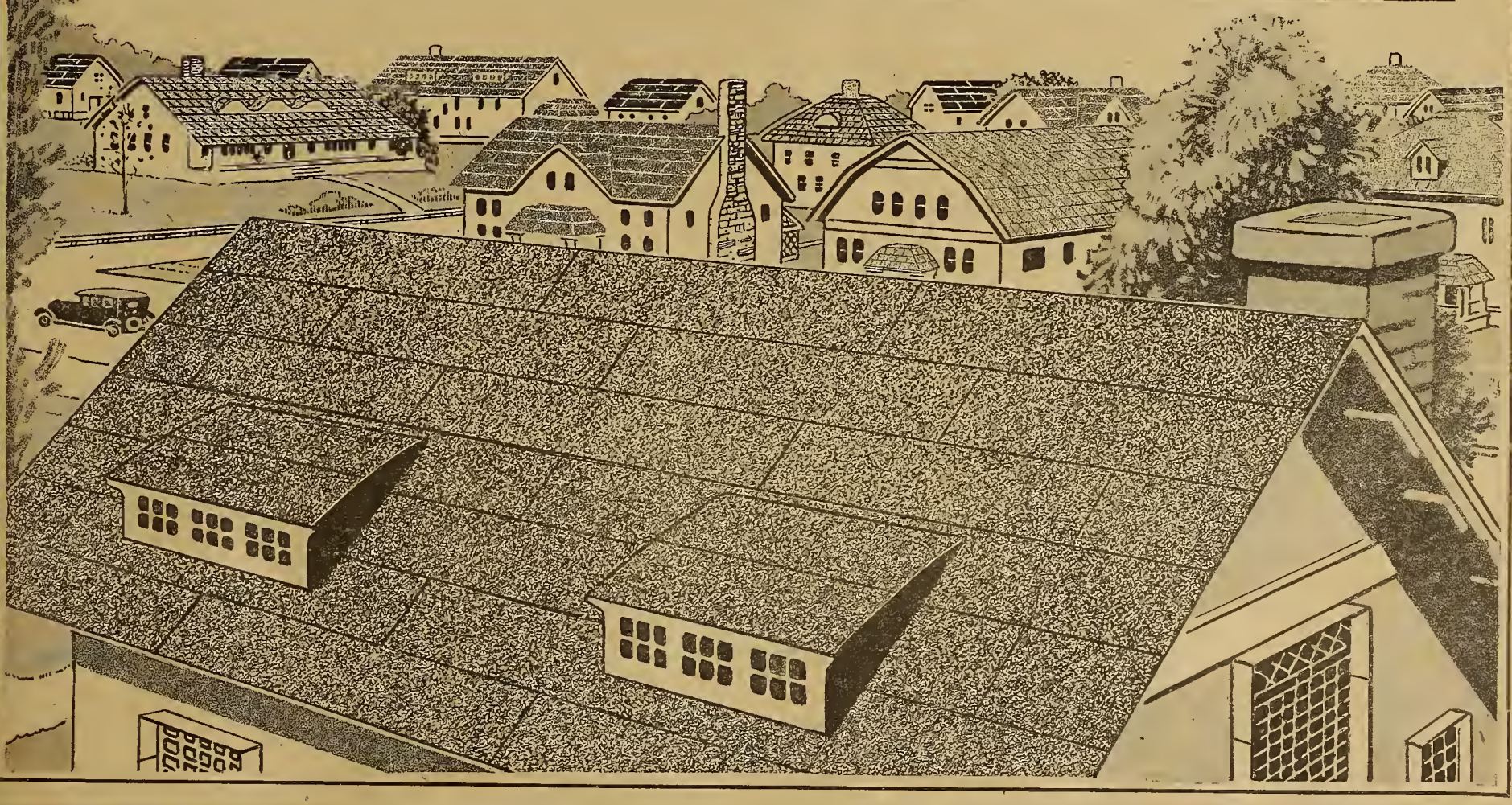
Send for Booklets Beautiful illustrated booklets fully describe each of the above types of Everlastic Roofing. Any or all of them will be sent you free on request. See list of offices below.



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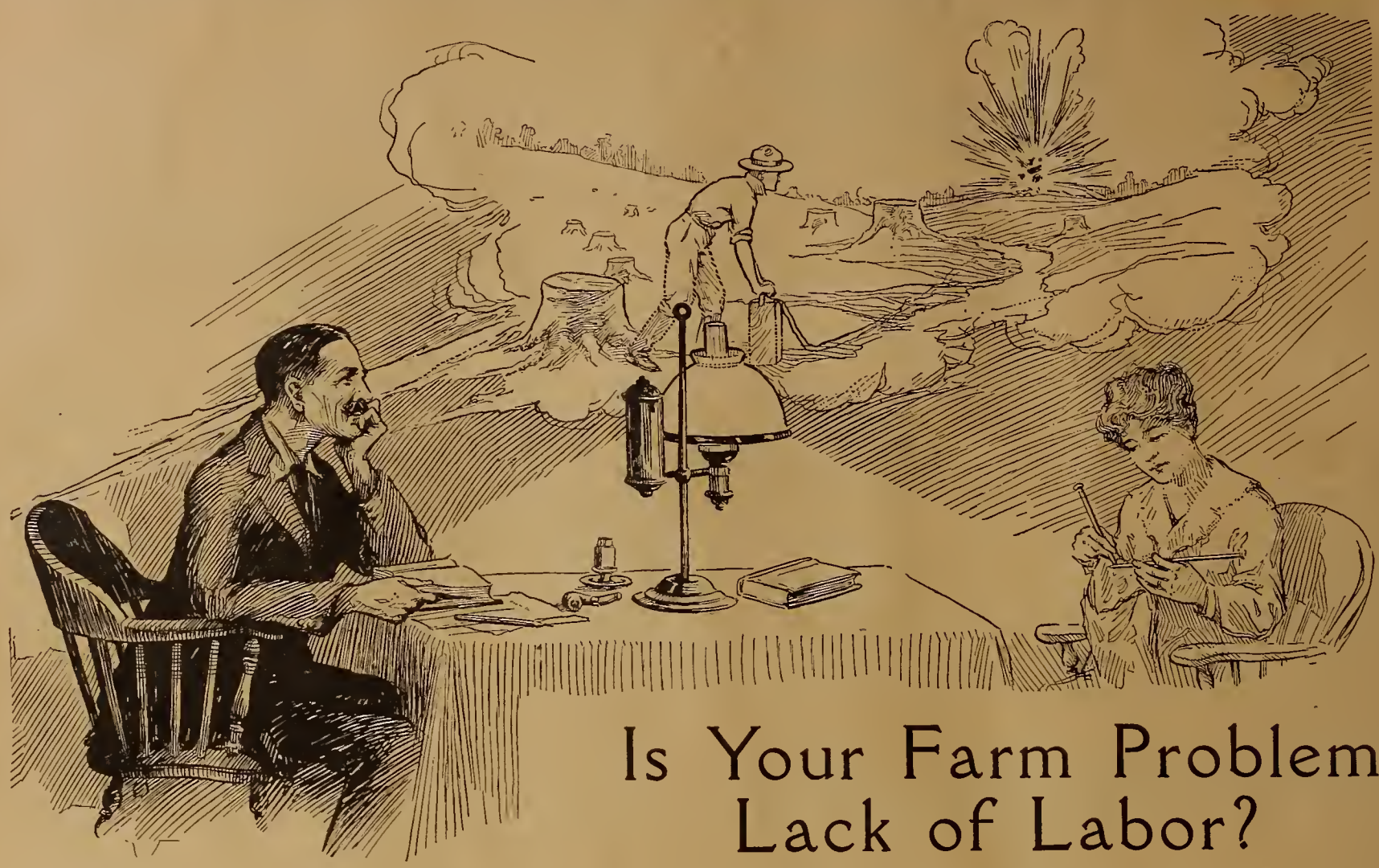

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The National Farm Magazine

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How I Was Treated in Five German Prison Camps—*By Private Ivan S. Rossiter*

"ABANDON hope all ye who enter here!"

Dante's famous quotation flashed through my mind as we neared Celle Lager, a German prison camp. What a dismal place it looked! Situated six kilometers from the town of Celle, on a moor, surrounded by one of those state forests that can be found in almost any part of Hannover Province,—here and there an open spot of moor, covered with a purple heather. It was a most dreary place.

On one side of the road leading to the camp were the ruins of some old buildings with low canvas roofs that had been formerly the barracks, until the more modern ones had been constructed. Near the gate were the administration buildings. Across the road were the officers' quarters. These were neatly built, and looked very comfortable with their vine-covered walls and verandas. Facing the gate, but about a hundred yards from it, was the parcel office. For this building we acquired an immense liking in a very short time.

The camp was a large wire-encircled enclosure about two hundred yards wide and four hundred long. The wire was eight feet high, turned in at the top, of very fine mesh and interlaced with barbed wire. It was also buried in the earth so that the prisoners would be prevented from digging their way out and escaping. In other camps the wires are charged.

At intervals of twenty-five feet were the sentry boxes. They were built on raised platforms, six feet off the ground, so that a sentry is able to mount the platform and have a splendid view of the camp. At every box, and also between, were placed high-powered electric arclights, so that at night the camp is brilliantly lighted. In addition to the electric arc, each box is equipped with acetylene gas lamps.

At the gate, inside and out, are two sentry boxes. These are painted in the usual German style with black and white stripes. The gates are double wired and padlocked, and two sentries march up and down on either side of them.

The camp was divided into two parts by a road. In the center of the road were covered stands holding fire-fighting apparatus and ladders. On each side were the barracks built in rows of ten in depth and five across, each fifty constituting a regiment. They are low unpainted structures, forty feet wide by a hundred long, with brick foundations. Outside the wire, scattered about, were the different barracks of the troops that were guarding the camp. The guards are mostly old men and those unfit for duty at the front.

Upon arrival we were taken to the administration buildings. Here our past history was inquired into, and then we were turned over to a Feldwebel, an under-officer of the German army corresponding to a top sergeant in the American army. This fellow had to count us over. It takes a German to count. Although there were only seven in our party, he had to count us three times. When this had been done to his satisfaction, he led us to the gates. After the sentry had counted us, the gates were opened and we passed through into the camp.

Photograph by Central News Photo Service

British prisoners never get down-hearted enough not to smile

The Feldwebel conducted us first to the storeroom. He took our clothing, and issued us a prisoner's outfit.

"I wonder what this is for?" asked Blaxland. "This" was a large sack filled with leaves.

"Don't know," I replied, "but perhaps it is a mattress." And that is what it proved to be.

We were given another sack, made of blue and white gingham and filled with newspapers. We were at a loss to understand this, but another prisoner informed us that it was supposed to be a blanket. Then we each received a towel, spoon, and bowl.

Recently in the United States I was caught in a blizzard, and we were stalled for eighteen hours. During this time the heat was shut off and also the water, so that we were unable to wash. Fortunately we had a diner and had sufficient to eat. During the breakfast a member of the party washed his face in the finger bowl. This brought back the old days in prison camp when we had to use our bowl for the very same purpose, although it was also our soup bowl.

The Feldwebel then turned us over to the "Chef de Company" to be assigned to a barrack. There was only one barrack of English in Celle. In the camps the different nationalities are kept entirely by themselves. At one time they used to mix them all up, but this brought confusion, so that the practice had been discontinued.

"Come here, fellows! Here are some new chaps," someone yelled. Soon we were surrounded by a number of English and Canadian prisoners, among whom were some of our old friends from Hannover.

"Where did you come from? What battalion do you belong to? Where were you captured? Been here long? How's everything in Blighty? Will the war soon be over?" These and many other questions were fired at us as they crowded around.

The German who is fortunate enough to be captured by the Allies has really a pleasant time. He is sure of good, clean barracks, with a bed to sleep upon and sufficient blankets and food. But it is different in the German camps. There are no beds for us. We have to sleep on partitioned-off spaces on the floor.

Each barrack is divided into four rooms—two small ones at each end for those in charge, and two large rooms, forty by fifty. They are kept as clean as possible, but that is not saying much. The ground at Celle was all sand, which used to get into everything. A twig broom had been issued, but it was impossible to keep the place clean with this. There are no tables or chairs other than what the prisoners have made themselves. Shelves adorn the walls. These are filled with the boys' parcels.

It was Saturday afternoon, and none of the fellows were working. Some were reading, writing, and others were playing cards.

I made the acquaintance of an Englishman who was known to his friends as "Boxer Haws." He became one of my best friends.

"Where were you taken?" he asked.

"At the battle of Sanctuary Woods," I answered.

"Was that at Ypres?" he questioned.

"Only too well do I know it," I replied.

"Come with me then," he said.

I followed him into the next room.

"Say, Dunc," he said, "have you still got that paper? Here is one of the boys who was in that battle."

From its hiding place Duncan brought forth what is the most highly

[CONTINUED ON PAGE 17]

Photograph by Central News Photo Service

In spite of their agreement to employ prisoners only in civil occupations, the Germans forced the British prisoners to construct trenches

Three harrows are easily drawn by a good light tractor

It takes eight men to carry wood to this tractor-driven saw

Farming with Less Help

By J. R. Kuntz

SINCE the small tractor has come into general use on the farms of 80 acres and less, there is one question that is much thought of and referred to, and that is—Will it pay best to keep the tractor on the farm only, or use it off the farm in doing work other than that at home? We find many who favor both uses. Most persons buy a tractor with the intention of relieving their teams of the really hard work, particularly plowing. While this is true, nearly every tractor owner finds other work for them to do, some using them for any work where horses have been used.

A tractor used at home will be longer-lived than one that is used at home and also in doing work for others. Many think home use only is the best way, and if kept in good repair it is certain to be of service for many years. The work required in plowing and other operations that can be done on the small farm will not keep a tractor busy all of the time. If care is taken to keep it in good repair and store it in a good shed where it is well protected from weather, the annual wear will be small. However, we find there are very many who are not entirely satisfied with their first tractor. They had no experience and did not know what to look for in purchasing their first one, and are willing to sell. There may be many reasons why they would like to get another—it may have been too small, or they may have seen others that they liked better.

The farmer who uses his tractor to do the work at home, and, when that is done, uses it in the spare time on work for others, finds that he has earned considerable money from its use. Thus, should he think he did not buy a large enough tractor, or should see another he liked better, or one that would answer his purpose better, he can sell or trade. He may sell at a low price and purchase another without losing anything, as he had had the use of it at home and the money it has earned.

Three years ago two brothers purchased a tractor and tractor plow, the tractor being a 8-16 horsepower with a three-bottom plow, costing $815 delivered. It was turned to many uses besides plowing. After the regular work was done at home, it gave them time to do work for others.

Believing that the experience of these two boys may be of some help to others who are thinking of buying a tractor, or to those who have one and are thinking of doing work for others, the figures and facts are here given:

Their farm is one of 150 acres, thus the usual plowing is 30 to 40 acres for wheat, 20 to 35 acres of corn, and about 30 acres of oats, the balance being in clover, some pasture and timbered land. There are 70 or 75 acres plowed each year, 20 to 35 acres for corn in spring season and 30 to 40 acres for wheat in the fall. The oats are sown in fields that have been in corn the previous year. This ground is disked thoroughly in the spring and oats drilled in, horses are used for drilling and corn-planting, the plowing, harrowing, and disking being done with the tractor. The 8-16 does this work well. It also pulls the binder in cutting the wheat and oats. As the work is done in much less time with the tractor, it leaves time for plowing, disking, and other work for neighboring farmers.

The first year that the tractor was on the farm not much other than the farm work was done. However, a second-hand four-roll corn husker was purchased for a very reasonable price, and was used to husk corn and shred fodder that had been hand-husked. The tractor furnished ample power. This proved to the boys that this work could be done in much less time. They also soon learned that many other persons wanted such work done. As it was now late in the season, little outside work was done the first year. Later they purchased a wood saw.

What One Tractor Earned

THE next year the usual farm work was done, and then the boys and tractor went out to do work for the neighbors. The husker and shredder proved to be very popular. Many neighbors wanted work done, but they had to refuse fully one half of those who asked for the machine. The tractor was also used to furnish power for a hay baler, one with a capacity of 15 to 20 tons a day.

When the winter months came and there was no farm work at home, excepting the regular chores, the tractor and wood saw were used. Coal was high, and there was a big demand for wood at good prices. Again they found that they could not saw for more than half of those who wanted work done and had asked them. A 34-inch saw was used. This quickly cut through 16-inch logs, so everyone wanted their sawing done with the tractor. It had the power and the saw did not stick in large logs.

This work was done during the winter and early spring months. Later, in the spring of the year, it was hitched to a road grader and the streets of the near-by town were graded. It was also used for plowing and disking for neighbors.

There are many other uses for tractors off your farm, such as hauling loads on roads, moving houses, running silo fillers, small clover hullers and bean or pea threshers, feed grinders, cider and cane mills. Often one will find someone who owns one or more of these, but has no power to run them.

The boys worked in the spare time that could be found from their regular work on the farm. Ten hours was an average day's work. Here are the figures:

CORN-HUSKING AND FODDER-SHREDDING: Fuel oil (kerosene), 20 gallons at 9c a gallon, $1.80; other oils, gasoline, and cup grease, 40c; labor of two men at $2 each, $4. Total, $6.20. Charge is made at rate of $1.50 an hour, 10 hours, $15; fuel and labor subtracted, $6.20. Profit each day, $8.80.

Fifteen days' work in fall of year, or total for husking and shredding, $132.

WOOD-SAWING: Fuel oil used, 15 gallons at 9c, $1.35; other oils, etc., 40c; labor of two men at $2 each, $4. Total, $5.75. Charge is made at $1.10 an hour for 10 hours, $11; fuel and labor, $5.75. Daily profit, $5.25. Twenty days during winter and early spring months at $5.25 a day, $105.

ROAD WORK, POWER ONLY, PULLING GRADER: Fuel oil used, 18 gallons at 9c, $1.60; other oils, etc., 40c; labor of one man at $2, $2. Total, $4. Charge is 90c per hour, 10 hours, $9; fuel and labor, $4. For the 10 hours, $5. Six days' road work, $30.

PLOWING FOR OTHERS: Fuel oil used for 10-hour day, 20½ gallons at 9c, $1.85; other oils, etc., 40c; labor of driver at $2, $2. Total, $4.25. Charge is $2 an acre, counting 5 acres plowed a day, $10; fuel and labor, $4.25. For the 10 hours, $5.75. Six days at $5.75 a day, $34.50. Pulling double-disk harrow 3 days and pulling the binder in harvest 2 days figured at $5 clear of expense, $25.

For all extra work for others in year, a total of $326.50. Less repairs, etc., $51.50. Total earnings $275.

This amount is clear of any labor or other expense and after all the work was done at home on the farm. Let us now subtract the $75 to cover expense of fuel oils, etc., for running the tractor throughout the year in the work on the home farm, thus having no cost for that item: we then have the use of the tractor on the farm, wages for the men while working for others, and $200 a year toward paying for the tractor.

We have figured $51.50 a year for repairs. These boys have spent less than that amount in the three years they have owned the tractor. One of these boys attended a college for three months, and learned the hows and whys of the gas engine. It cost him $75, but they have saved more than that amount in the three years.

Figuring $200 a year in earnings and keeping the tractor but three years, you [CONTINUED ON PAGE 21

This tractor has released one man and four horses for other work

The Confession of a Timber Buyer

By John Calderhead

"THESE farmers are easy to handle if you go at them the right way," the Boss told me. "They don't know what their timber is worth. You do. Consequently you can buy it for anything you want to pay for it, if you make them think they're getting a fair price."

I had taken a job as land agent for the Boss's lumber company. He was giving me a line on my work and at the same time was getting a line on me, and was giving me some pointers from his own experience. The Boss had come down from the North some years before, and had made a couple of million by buying yellow pine stumpage at about 30 cents a thousand when it was worth $1 or $1.50. His methods were still the same, though the price of pine stumpage had gone up a trifle.

"How much of a trader are you?" he asked me abruptly.

Now, to be frank, I am not much of a trader. I have a weakness for my own things which makes me loath to part with them readily, and I lack the real trading instinct which makes some men ready to swap anything from a toothbrush to a house and lot.

I told the Boss something of this.

"You've got to be a good trader," he said emphatically. "Getting the best of a close deal is the most important part of the game. In your job you've got to know how to out-talk and outguess and outswap the other fellow, and still make him feel satisfied with his end of the deal, or at least long enough to sign the sort of contract you want. You go down to see old man Cooney. They don't make any smoother traders than he is, and he can give you some pointers."

Mr. Cooney, it developed, was the local land agent who looked after the 75,000-acre tract of land which was then being logged. My work, I learned, would be to buy up the scattered patches of private timber and rights of way for the logging railroad, sell cut-over land, rent the cleared fields on company holdings, and see that no one stole our timber or land. At odd times I could make maps, get the tax lists and tract books up to date, and list as much land as possible as cut-over, in order to save taxes.

Primarily, I had to know the country, so I went down to meet Mr. Cooney. I found him a wiry, white-haired man with an aggressive goatee, who looked as though he might be fifty-five or sixty years old, but who was actually seventy-five. The old gentleman couldn't travel far on foot, but he could ride all day and half the night and never show any fatigue. He looked like a cross between a belligerent rooster and an aggressive billy goat, and he had thick, bushy eyebrows, which added to his fierce appearance. His eyes were the bluest, coldest eyes I have ever seen. When he was driving a trade they narrowed down to pin points, but at other times they were merry and quick and sparkling. He knew the title of every 40 acres of land in two counties and the history and financial standing of every family in our territory. If there was a blot on the escutcheon, old man Cooney knew and remembered it. I don't think he ever forgot anything.

I was to get my first lesson in timber-buying that day, it seemed. "Jim Hobson's cow died last week," Mr. Cooney told me, after we had been riding for a couple of hours, "and I kinder reckon he'll be wantin' to sell that odd forty that jines up with us. So we'll just chance by his house this evenin' and maybe we can strike up a trade."

We rode all morning through the splendid pine forest which covered the rolling sand hills. Beautiful, long-boled, clean timber it was; timber to make a lumberman's heart glad—mile after mile of it, with only an occasional break where enough land had been cleared for a field. These little farms were miserably poor, and I came to realize the full meaning of the term "Po' piney woods land" I had heard so often. Corn and cotton were the two inevitable crops, with perhaps a small patch of ribbon cane, and maybe one of sweet potatoes. Around the mud-chinked log cabins there were weed-infested gardens, of which collards seemed to be the principal product.

Early in the afternoon we reached Jim Hobson's upper forty. Following the line, we rode around two sides of the tract and then across through the middle of it. To me it was a new way of estimating timber; I was accustomed to doubling back twice across a forty and making a 10 per cent estimate. But this was Mr. Cooney's favorite method and, for his purposes, quite as satisfactory as my longer and more expensive one. As nearly as I could judge, there was at least 200,000 board feet on the forty. It was worth at least $3 a thousand, considering its distance from the railroad; had it been better located it would have brought $4. The land was worth, at the lowest, $3 an acre.

"How much do you say there is?" I asked Mr. Cooney, anticipating the same question from him, and curious to know how his estimate would compare with mine. The old man stroked his goatee until it stuck out at its most aggressive angle. We were out of sight of any house and no one had seen us come up, but he rode his tough little pony close up to my horse.

"Wal," he hesitated in a lowered voice, as if afraid of being overheard, "you might say there's about 50,000 good stuff and about 50,000 not so good. What do you say?"

"There's all of that," I answered guardedly.

Mr. Cooney gave me a knowing look and laughed a pleased laugh. "It's thar, all right," he cackled; "it's thar, and maybe a leetle bit more."

When we rode up to the house we found Mrs. Hobson at home. I was introduced, and shook a flabby hand, hastily cleaned on her apron. We did not dismount, and Mr. Cooney explained who I was and that he was showing me around and getting me acquainted with all the folks. He inquired after her health and that of a number of relatives and friends, and she reported fully on each case.

Mr. Cooney was careful to ask about Jim only in the most casual way. He said it made no difference that that worthy was not at home, and I could meet Jim the next time. He was plainly distressed and surprised to learn that the Hobsons had lost their cow, and offered to look out for another one for them. Nothing was said about the upper forty, and we bade Mrs. Hobson good-by and rode off. But as we reached the road we met Jim coming home in haste. A tow-headed youngster had evidently been dispatched to find him as soon as we came in sight.

"Well," Mr. Hobson said, after greetings had been exchanged and he had informed us, in response to Mr. Cooney's inquiry as to his health, that he had a right smart misery in his back, "you-all come go back with me and stay all night."

"Naw," Mr. Cooney told him. "We've got to be ridin'. We've got a long ways to go this evenin'."

"I don't reckon you know of anybody that wants to buy a cowhide?" asked Mr. Hobson.

Mr. Cooney wasn't sure. He sometimes bought cowhides, it seemed. He might look at it. We rode back to the house and inspected the hide, tacked up to dry on the barn. In the meantime we learned the detailed history of the late wearer of the hide. Her qualities as a milker, as a mother, and the details of her demise were graphically described. Followed a bit of bargaining, as a result of which Mr. Hobson agreed to deliver the hide to Mr. Cooney's house the next time he was over that way, and to receive the munificent sum of $2.50.

We moved finally toward our horses.

"You-all buyin' land this trip?" asked Mr. Hobson as we were ready to mount.

"No, we're just gittin' acquainted," said Mr. Cooney.

"I kinder 'lowed you might want that upper forty of mine some day," ventured Mr. Hobson, forced into the open by Mr. Cooney's master strategy. Could he have succeeded in getting Mr. Cooney to broach the matter, his position would have been infinitely stronger, but he was no match for the old man.

Mr. Cooney was evidently surprised to learn that Mr Hobson had even considered selling th land in question.

"We was lookin' over the lines as we come by to-day," he said, "but I never thought you'd want to sell. Do you reckon the company ought to have that forty?" he asked me. "I've done spent so much of their money, I'm a little wary 'bout buyin' timber nowadays."

I thought we might consider the purchase if the price was right. Though, of course, money was tight, and I said as much.

I found Mr. Cooney a wiry, white-haired man with an aggressive goatee, who looked 55 or 60 years old, but who was actually 75

THERE followed some more skirmishing for position, in which Mr. Cooney was again victorious. With a great show of candor and a desire to do the right thing by a friend, he went into a minute account of the hard times that were upon the country, the difficulty of getting money, and how cheap timber could be bought up in the northern part of the county. Mr. Hobson's forty was in the extreme southern end. He assured Mr. Hobson that the company could not buy unless the tract was a bargain, and requested him to state the lowest cash price he would take, "because it's your propt'y and it's for you to say." As he talked, I decided what the forty was worth—200,000 feet of pine at $3—$600 for the timber; forty acres of land at $3—$120; $720 in all, and a bargain at that.

Mr. Hobson was slow to make up his mind, but finally he spoke.

"I don't see as how I could take less than $350," he said after a long pause. Mr. Cooney, who had been tightening his saddle girth, finished at the psychological moment.

"I'm afeard we can't trade," he said decidedly. "Now, I'll tell you," he went on, cutting off a riding switch and then facing Mr. Hobson, "it's your land and it's for you to say what it's worth, but the company couldn't pay you what you ask for it. Now, from what I've seed of it, I'd say it was worth just about two hundred and a quarter. Wouldn't you?" he asked me.

I recovered enough to agree.

"I couldn't sell it for that," Mr. Hobson said quite firmly.

"We'd better be movin' along," Mr. Cooney told me, "the sun's gettin' mighty low." Here there was business of fixing his leggings. He untied our horses.

"I'll let you have it for $300," Mr. Hobson announced as we prepared to mount. Mr. Cooney shook his head and put his foot in the stirrup and swung into the saddle. "Come and stay all night when you're over my way," he said.

Mr. Hobson said he would. Then: "I'm sorter needin' the money," he admitted. "If you want to give me $275, I'll take it." It was an admission of weakness and Mr. Cooney knew it.

"That's too bad," he said. "Now, look here," he turned to me. "Mr. Hobson's a mighty good friend of the company's and he's a good man to have out here in our timber, for he allus lets me know when anybody's like to cut over our line. Do you reckon we could stretch it to $250?"

After due consideration I reckoned we could, and we did, and after more consideration Mr. Hobson accepted the $250. We dismounted, filled in an option, for which I paid a dollar, and, declining another invitation to stay all night on the plea that we had to get down to old man Billy Phare's, we left.

This piece of sharp bargaining was typical of Mr. Cooney's methods. He always traded on the basis of the necessities or misfortunes [CONTINUED ON PAGE 21]

When You Go to New York

By W. L. Nelson

WHY doesn't somebody write a guidebook, a sort of A B C of a big city? Such was the question that came to us the day we saw Greater New York for the first time. True, we had before leaving the corn-belt country invested in a travelers' official guide of New York City. Yes, and we studied this two-bit book as earnestly as any unsophisticated freshman ever studied a college catalogue, believing that once we had mastered the subject matter all would be easy.

We knew that the Metropolitan Life Insurance Building occupies an entire block, has 52 stories, and is 700 feet high; that the Woolworth Building, 55 stories high, is the tallest occupied building in the world; that the Statue of Liberty on Bedloe Island was presented to America by the French nation, and that the electric torch held aloft by the colossal figure of Liberty is 306 feet above the water; that a certain store has 34 acres of floor space, and that Trinity Church stands at the head of Wall Street—a mighty fine place to stand.

These facts and many more we got from that book, and we are not saying that it was no good, but what it told us was not what we wanted to know just when the Pullman porter, who seemed to like his quarters, also coins of larger denomination, announced Pennsylvania Station as the next stop. The knowledge that we felt in need of right then was such as the guidebook, which was probably written by somebody who knows New York from the Battery to the Bronx just as well as we know any "forty" on the home farm, failed to give.

Of course, it's quite likely that the gifted individual who wrote the book, and who neglected to supply just the kind of information we wanted, never for one moment doubted that everybody knew all about such things, or that anybody who didn't was "green as a gourd," as we say out in the corn belt. Yes, we confess that we were green about the city, just as green as city folks are about the country. Yet, we do not acknowledge to the garish greenness of a certain city man who visited one of our neighbors last summer, and who thought that the way milk was pasteurized was merely by turning the cows on pasture.

Again, we want to make it plain that we are not saying that the aforesaid guidebook was no good, but we do declare that as a first aid to fellows like us, who are fresh from the farm, it wasn't worth a bit more than a boil on the back of your neck—maybe not as much. The boil has one advantage: it keeps you from leaning too far back when trying to count the stories in one of the many tall buildi .gs which make the Manhattan skyline jagged as the teeth in a cross-cut saw.

As a historical volume such an official guidebook of New York ought to take high rank. Especially is this true if history is just past politics and politics future history, as somebody has said. For they do say that in New York politics is both a profession and a means of livelihood.

We said that, measured by the city standard, we were green. We acknowledge the corn, coming as we do from a corn country. As we stepped from the train we had a "funny feeling inside of us," just as our little six-year-old said he had when he neared the district schoolhouse on the opening day. It may be that you, Mr. City Man, never had such a feeling—not unless you at some time visited the country and were chased by Bossie's big brother.

But just because we say that we were green let nobody imagine that we, like the farmer in the cartoon but not in real life, had hayseed in our hair, or that we were growing alfalfa on our chin instead of in properly inoculated and thoroughly limed land. There's no more reason why a farmer should be so pictured than that a New Yorker, accustomed to burrowing his way under ground or taking an elevated, should develop claws like a mole or—well, we were about to say wings like a bird, but who can imagine the average Manhattan man wearing wings!

To the New Yorker—even the New Yorker who much of the time rides swiftly about on rubber in a year-after-to-morrow model—we would say: "You know all about subways—at least, all that it is necessary for you to know in order to become a part of the big human sausage link that is daily compressed into 'the tube.' You are accustomed to the roar and rattle, the clang and the confusion. But it all seems strange to one whose life has been spent in the West, where not so many years ago the cowboy sang to his steers, 'Roll your tails and roll 'em high! You'll be beefsteak by and by.' Out West where we get down to the grass roots of things, we put off going into the ground—postpone the planting—just as long as possible."

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The Woolworth building, 55 stories high, is the tallest occupied building in the world

To us, riding in the subway for the first time was a real experience; but why pause to describe it? You, Mr. New Yorker, know how you felt the first time you took an undersea trip. Of course you do. First of all, you didn't know where you were to buy your submarine ticket; in fact, you were not, at first, sure that you needed one.

Then after you have learned that a ticket was required, you were not quite certain as to what you should do with it. For all that you knew that submarine might have been a pay-as-you-enter or a ring-it-up-as-you-please affair. Then, too, there was some little question in your mind—honest to goodness, now!—that it might be puzzling to know where to get off under the water or how to change craft. Wasn't there? Wouldn't it have been sort of comforting, don't you know, if the Guidebook of the Sea had told you a little more about submarine estiquette and procedure and a little less about sirens and such?

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The Statue of Liberty was presented to the United States by the French people

Subways costing $300,000,000 aren't just exactly common out in the corn-belt country, where the average citizen's experiences with tunnels is limited to those that connect house and cyclone cave, or which have to do with root cellar or pit silo.

What if we folks from the country aren't sure of a lot of things that city people seem to take to just as a duck takes to water? What if we are in doubt as to the side of the street on which surface cars stop, or how we should signal when we want to get off? What if we do start to carry our ticket for subway or elevated road into the car, where one naturally expects a conductor to come along and take it up? How could we be expected to know about those funny little boxes that the tickets are to be dropped into?

Then there are the Fifth Avenue buses. Imagine a stranger, one whose travel experience has been confined to mixed trains where it is economy to hand the conductor a dollar or some fractional part thereof instead of buying a ticket to which is attached a war tax, riding in one of these rigs. How is such a person to know that when the conductor sticks out a hand in which he holds something that looks like a sawed-off automatic that the proper procedure is calmly to deposit a dime in the slot?

The author of the guidebook hadn't thought it necessary to explain what, to him, were such simple things; and we, like thousands of others who visit New York for the first time, didn't know. It may be, though, that Mr. New Yorker doesn't know what "gee" and "haw" mean in driving a team; that he isn't certain as to the proper side on which to sit when milking a cow, or the correct side from which to mount a horse. Yes, and it's barely possible that he doesn't know how to quiet a bucking broncho.

What would we put in that guidebook? Well, in the first place we would say: "Use gumption. Keep your head—you may need it for a hat. Ask questions. Ply the policemen, but remember that they are not mind readers. Failure to get a satisfactory answer may be due to the back-firing fashion in which a question is asked. Don't 'four-flush;' don't even 'two-flush'."

The Trial Ground of a Continent

DON'TS that we would suggest would include: Don't hand your baggage to the stranger who offers to carry it for you—not unless he is in uniform or wears a cap indicating his position. If not necessary to take a cab, don't do it; if necessary, then patronize a good company—one whose representatives display their numbers—instead of trying to save money by dealing with a "scab." Don't try to save money by stopping at the cheapest hotel you can find, as the difference in charges between a good hotel and a cheap place isn't enough to justify you in taking chances of being robbed. Don't eat at cheap, dirty places. If you cannot afford, or do not care for, the more elaborate places, patronize one of the restaurants the names of which are well known, or go to any clean place whose patrons are apparently high-class business people. Don't hang around fake jewelry auctions, or unnecessarily push your way into closely crowded quarters of any kind. Don't display a "roll," and don't carry any more cash than you actually need. Don't get drunk with impunity—or anybody else.

What are some of the things that we suggest that the visitor do? Observe traffic rules, for this is the first law of safety in the city. In the country we are accustomed to moving about as we please. In the city, though, the crossing policeman's sign and whistle must be obeyed, and when the proper time comes to move it's up to every fellow to get a hustle on him. Yes, you've got to hurry. Make some study of a reliable map of the city. If you are on a sight-seeing expedition learn just what the most interesting things are, and how to reach them. If short on time, patronize the best sight-seeing cars. Arrange definite daily programs. Make positive business agreements in advance. Know just what things are going to cost. Have plenty of confidence in yourself, but beware of confidence men.

New York sleeps with one eye open, yet she's never been able really to see herself—at least, not as others see her. Friends familiar with her ways cannot measure her beauty nor her blight. This privilege is reserved for the stranger, for the man who can be surprised, shocked, startled, and for whom there is still something new under the sun.

To see New York may mean to change our conception of the city, which, first of all, is the human trial ground of a continent. To this city go many seeking the things for which they have starved—and end up by starving. Thousands stumble and fail; a few succeed—suceed as they could nowhere else in the world.

New York, busy New York, is more than a buyer of bonds: she is a buyer of brains, and with her there is absolutely no limit to the price that a big brain will bring. Such is the secret of her success.

How Canada Met Her Farm-Labor Shortage—*By Justus Miller*

Assistant Commissioner of Agriculture, Province of Ontario, Canada

CANADIAN farms were in dire need of labor the first few months of the war. Many young farmers joined the colors. High wages in the munition factories took them from the plows and reapers. Then, in the face of an acute labor shortage, the Government asked for an increase in farm production, and Canada, undaunted, met the demand.

It was not an easy thing to do. It required the enlistment of every available mechanical and human agency, and the whole-hearted co-operation of the farmers.

To accomplish it, the farmers themselves redoubled their energies and lengthened their working hours. The Government carried on a nation-wide publicity campaign emphasizing the need of farm help, and bringing the latest knowledge of good methods and mechanical helps to the farmer. City men closed their offices early and worked on the farms. College students and high-school boys by the thousand left the classroom for the field. Girls and women were enlisted for picking and packing fruit. Farm tractors with all necessary equipment were purchased by the Government and worked upon many farms at small cost to the farmers. As a result the 1917 crop was above normal.

And now the United States is fighting beside us. In a large way, what were our problems are now yours. An American traveler recently said to me: "Yes, America is in the war, but we haven't felt it yet." Whether or not the statement is the truth, you may judge; but if it is true, your experience parallels ours. We didn't feel the war just at first either.

Canadian city boys and business men helped the farmers

But Canada feels it now. From Ypres to Passchendaele she has felt it in blood; and in tears she has felt it at home. In every phase and department of life, national and personal, she feels to-day the keen effects of war. Canada has grown accustomed to the "feel" of war, and the feeling has but tempered her resolution.

In no regard has she felt it more than in connection with her farm-labor problem. The farm-labor shortage in Canada is not, however, peculiarly a war problem. For many years prior to 1914 it had become steadily more acute, until it was generally recognized as the farmer's greatest handicap. The more immediate effect of war upon farm labor was of a threefold nature.

In the first place, a large number of those born in the British Isles promptly volunteered for service in the Canadian army when war was declared. By the end of 1915 practically all the militarily fit of this class had enlisted, as the composition of our first contingents attest. Thus a most important labor element, particularly in Ontario, was lost to agriculture.

In the second place, large numbers of Canadian-born farmers and farm help enlisted after the seriousness of the war became evident. From one small county in Ontario 2,000 men have gone to the fighting front. This condition is common to every province but one in the Dominion.

A third factor was the competition of factories. As munition factories were developed the demand for men sent wages to a hitherto undreamed-of height. In order to keep their plants in operation, other factories were forced to skyrocket wages also. Farm products at that time had not reached present prices, with the result that farmers could not very successfully meet the wage competition of other industries. By the end of 1916 the labor situation, as related to farming, was the most serious in the history of Canada.

Without strong counter measures conditions would have been desperate. But these were brought to bear upon the question, and among the most effective was the farmer's own spirit. He rose to the occasion in a way that commands respect. He worked longer hours than ever before, he applied himself still more diligently to a study of better methods, and, despite all disadvantages, managed in 1917 to produce a normal crop. The high-price influence since 1916 has no doubt contributed much to this end.

The demand for the government-owned tractors exceeds the supply

But beyond and above all that has stood the farmer's stern determination to do his part in the struggle to safeguard humanity.

This viewpoint was partly shaped by a huge federal production campaign, initiated and directed by the late Dr. C. C. James, federal Commissioner of Agriculture in the fall and winter of 1914-15. It was called the "Patriotism and Production Campaign." Advertising space was used lavishly, and local meetings were held in rural communities from the Atlantic to the Pacific. At these, agricultural experts outlined the situation and pointed out the great importance of agricultural production. An Agricultural War Book was also published, which still further amplified this thought. Very clearly, in that early day, Dr. James emphasized what is now common knowledge—that the war would be won by men, munitions, and food, not one being of minor importance.

In principle the campaign was highly to be commended. The season in 1915 was favorable, and Canada that year garnered the bumper crop of her history. The information given regarding trade conditions, better cultural methods, and the like, was gladly received, and there can be little doubt that, even though the appeal had certain weaknesses, it hardened the determination of the farm public to stand behind the boys at the front with every available pound of foodstuffs that could be produced.

Weather conditions in 1916 were unfavorable and crops were poor. Certain lines of assistance to farmers, regarding labor, were being developed and the short crop was safely taken off. But world food conditions had become alarming, farmers had lost much of what help they had been accustomed to depend upon, fall plowing had been greatly retarded, Ontario alone had 400,000 acres of sod more than in 1913—the prospects, in short, for 1917 did not appear bright. Only a long pull and strong pull and a pull altogether brought normal crops again.

Conditions of farming and labor demands are radically different, of course, in the various provinces of the Dominion. The western or prairie provinces, specializing in the production of grains, require great additions to the regular help supply during harvest and threshing. Ontario, largely devoted to live stock, mixed farming, and fruit, requires a more constant supply, although during haying and harvest many thousands of extra hands are needed. Quebec and the maritime provinces have fewer factories, are less developed agriculturally, and have a large proportion of the population on their farms.

The District Agents Were Effective

IN THE West, high wages have been the laborer's inducement. During a limited season agriculture could compete successfully with other industries. Last year the high-wage factor, with suitable organization, gave fair results. Early in the spring labor agents toured the United States, and were successful in securing several thousand university students to assist with the spring seeding and summer work. Fifty dollars with board was the minimum wage paid. The regular harvest excursions were organized from Ontario and Quebec to supply labor for the harvest and fall work. Those from the maritime provinces were discontinued, however, by order of the latter. Wages varied from $3.50 to $7 a day, averaging about $4.50. Seasonal help was also secured from towns and cities. Many hundreds of men, representing all classes, spent their holidays working upon farms. In several towns early closing of business was organized. At four o'clock all of the men who could leave were taken in automobiles to farms within striking distance, where they worked in harvest fields until dark, in many cases without pay. Hundreds of schoolboys, old enough to be of assistance, spent their holidays on the farms. Farmers' sons and daughters, of course, helped upon the home farms, many leaving school early for the purpose. Hundreds of these drove grain wagons during threshing last year. In British Columbia, schoolgirls were employed in groups in the fruit districts with first-rate results.

In no part of Canada, however, has this latter feature been widened to the extent of training girls and women, not accustomed to farm work, for team driving and the more heavy field work. Schemes have been evolved to have town and city women work in farm homes, thus assisting the housewife and enabling her to contribute a part of her time to the farm work. But in no case have they been successful to any important degree. In some cases [CONTINUED ON PAGE 22]

Girl fruit pickers lived in Y. W. C. A. camps

A Man Chooses

The Story of a Struggle to Attain a Great Ambition

By R. W. JOHNSON

DO YOU know that a man may think more of a mechanical creation than of his wife? Bud Barnes did, or thought he did, until the day— But that's the story.

In the Barnes family there had always been a fiddle and a fiddler. The strain dated back, perhaps, to a far-off ancestor who talked to life over a finger board, talked in such fashion as to make life want to be cleaner, sweeter, saner. The talent came down the line to its last scion, Bud, and spoiled a potential farmer. The man was not content to till his acres and make a living for his wife. He had a higher aim—a double-headed ambition. He was going to make a violin better than any the world had known. He was going to prove old Strad a back number. And he was going to master the masterpiece.

He could play "Devil's Dream" before his curls were shorn, and he shaped fiddles with his first jack-knife, whittling up every pine box within reach. Before the time of his marriage people began to say it might be Bud Barnes would do something some day, for he had invented a bass bar which at once rescued his work from mediocrity. He knew why some instruments bellow and some talk through their noses. He was making close, shrewd guesses on the influence smallest variations in size and shape have upon tone quality. He knew how much sanding down it takes to shake the woody response. In short, he was trailing his game.

Nadine, the girl he married, did not know a masterpiece from a gourd—but she knew Bud! She loved Bud and she loved his obsession in a queer, fierce, mothering way. She knew the lure of the pay check—she had been a school teacher—but she gave not one backward glance at lost opportunity. Her husband was a genius, and she was going to help him make good.

What matter that the home was crumbling about their ears? What matter that frost nipped neglected fields and ruined the cane crop? She was strong—she would lift at the load. She could make butter and sell eggs. She could sit up nights writing boomerang articles for the papers. Privations didn't hurt. Discouragements slid off like water from the proverbial feathered back. Bud should have his chance.

Nadine had no musical faculty whatever. But she felt that Bud's knowledge of music, learned from a neighborhood teacher, was probably faulty and imperfect, so she urged upon him the need of higher standards. And she sold a pet heifer and made many pitiful personal sacrifices to enable him to make weekly trips to the neighboring city to become a pupil of a noted professor there.

Thus encouraged, the man threw himself into the passion of learning. Musical terms and movements filled his days and troubled all his dreams. His evenings echoed to the wail of smitten strings, alternated by the chip of chisel and rasp of sandpaper—he was bringing forth another wood-encased ideal, and Nadine was no more to him than the furniture. Sometimes her lips blanched a little as visions of her loneliness rose, tide-like, advanced and broke harmlessly against the rock coast of her soul. She would not be jealous of his art. Bud should have his chance.

Some such hour was upon her as she picked her way from the creek bottoms, her basket full of late beans. She had left Bud at the last stretch, almost ready for the voice of the latest child of his skill—the little red beech. He had worked on the instrument many days, feverishly as it neared completion. Certain new theories he was trying out—would results be unfavorable? He was banking on this violin—maybe it was *the* masterpiece. But so he had dreamed over each new acquisition, only in the end to shake his head and begin another.

She quickened her pace in her eagerness to reach the house. Before her was the memory of the man's eyes, brooding lovingly over the thing of wood and glue as he scraped and polished. Her own filled with stinging tears, but she dashed them angrily away. Jealous—of the Little Red Beech? Was she so unworthy of her man? Oh, *no!* She must hurry, to be near to comfort him if—

She went into the kitchen, closing the door behind her, and set her basket on a shelf. Bud heard her and came from the other room. He stood regarding her in silence. He was trembling, and his lips were colorless. His eyes held strange fires. When he spoke his voice was unfamiliar. "Stay there!" he commanded. "Listen!"

He went back into the other room and Nadine listened, holding her breath. The tones of a violin came to her, soft, clear as a bell, tremulously sweet. Deep and powerful on the bass; like bird calls as the melody swept upward. After a moment there was silence, and she went to him. The new violin lay on the chair beside him, the bow dropped to the floor. He was huddled forward, has face in his nerveless hands.

He was trembling, and his lips were colorless. "Stay there!" he commanded. "Listen!"

Her arms went around his neck. "You've done it, Charley; and I knew you would." She choked, using the name so seldom spoken it had ceased to seem his. "You have done it! There has never been another like it in this part of the country, perhaps nowhere else in the world. I'm no judge, I—but it is fine. I feel that it is fine, and altogether—different."

He raised his face at that, laughing, and drew her to his knee.

"You're right, Deen," he acquiesced. "Right-to! Salute the master—the Little Red Beech!"

He followed her to the kitchen and, aimlessly fumbling all small objects in reach, watched her kindle the fire, his face still very pale. With boyish impulse at length he reached for his hat.

"I think we should celebrate, Deen," he laughed. "While you start things I'll run to town for oysters. We'll have a stew. I'll not be gone a minute, honey."

After he had gone she picked up the broom his nervousness had overturned and went to the untidy living-room. It was always untidy, a condition at which she made no demur. It always had its litter of dust and fine shavings, its array of clamps, scrapers, and bits of sandpaper on floor, chairs, and table. It was Bud's workshop, as was every room in the house.

When he came back the stock had been fed, the cow milked, and the house closed for the night. Bright lamplight shone on the spread board, warmth and comfort reached out a welcome. He set his basket on the table and took from his pocket a couple of letters. "Yours and mine," he smiled. "The world remembers us. Mine is from—why, yes, from Ember, the old teacher!" He began reading the enclosure aloud:

DEAR CHARLEY: I've been here at Summerland, at my son's, for a week now, and I thought you might like to hear from me. Say, boy, you ought to be here! There's a big music school and they are turning out men and women of talent who are going to do things. My son's oldest boy is attending, and, say, I'd love for you to hear his fiddle talk! We're not in it, Bud, you and me, though we think we know a lot.

In my family, just as in yours, there has always been love of music, a hankering for the out-of-reach. But this grandson of mine is going to get there. If I were young I'd get there, somehow. I think of you with your youth and talent.

Can't you make it some way, Bud? I'm going to send you one of their catalogues. It will show you their courses, cost of books, tuition, and other things. My son says he would board you cheap, and his house is close to the college. If I had the money, Bud, honest, I'd let you have it, give you the boost; but I haven't, so what is the use?

Maybe you can raise the wind yourself. I know if you had your chance you'd make good, like the old fellow way back who founded your name and is still mentioned in musical write ups.

Bud read to the signature then folded the letter and returned it to his pocket. A new hunger was burning in his eyes—a hunger Nadine saw and understood.

"You'd like to go, wouldn't you?" she asked, and he nodded.

She stirred the oysters forgetting her own letter, a letter from home, as the postmark told her. "If you were free, Bud, unhampered, maybe you might—"

He missed the acute misery in her voice. Roughly he drew out a chair and dropped into it.

"Of course!" he retorted grimly, almost resentfully. "That's what young folks always get by tying up in the puppy age! What's your news? Better read it."

Her face went but little paler when she read her news. It was from the old-maid sister at home.

Mother is very sick. The doctor has but little hope of her recovery, I'm sure. And, Deen, she is pining to see you once more. Can you arrange to come home, if only for a few days? Remember, you haven't been back since you married. It seems to me, from what I've seen of life, that husbands are cheaper than mothers. We are losing ours. Will you try to come?

It was then Bud Barnes rose to his height of manhood.

"Of course you are going to your mother," he announced when he had read the word. "A fellow, yesterday, was wanting to buy my old fiddle. I can spare it now. I can use the Beech. First thing in the morning I'll hunt him up. He'll pay cash, and glad to do it. Get your things ready. I'm sorry about Mother, Deen. We've neglected her, but it looks like we never could make the way to go."

There was no pleasure for Nadine in that belated visit—only grief and a sense of unreality. The dear mother-face, grown strangely remote, the pinch of death in its sagging lines, strangers coming and going, noiselessly, sympathetically, everywhere the atmosphere of waiting—it was all like a bad dream. But through it all, hidden and unacknowledged, ran a deeper, sharper ache—*Bud and his chance.*

A stranger face grew very familiar during that hard time—the face of the attending physician. She grew to watch for its little personal flash of understanding and sympathy. There had been so few in her bare young life who cared, however remotely, for her needs, physical or spiritual. It was a new sensation to be followed by respectful but admiring glances. It was a new sensation to rest her weakness on a man's strength. In her awful trance, watching the fight for a life, the subtle fascination crept through. And when the end came, and out of chaos she heard this new friend offering what seemed a larger life, she came suddenly to a place where her life's road blurred before her.

On its face the proposition was honorable and munificent. A chance of travel, a new atmosphere, a big salary—all to care for and train a little weakling child. Somehow the man, without the vulgarity of speech, let her know just what the child's mother was not, just why he and the child needed Nadine. There was nothing Bud would have resented, nothing the world would condemn. But— [CONTINUED ON PAGE 30]

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For the largest tire business the past year that the world has ever known, this company is indebted in large part to the American farmer.

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GOODYEAR

AKRON

Peaches and Profits

By W. J. Green

Year after setting, unpruned

TO TELL how peaches can be and are grown without profit, and stop at that point, would be an easy task. But I do not need to remind FARM AND FIRESIDE readers that peaches are not as a rule grown as a pastime. It is common knowledge that the growing of this prince of fruits—its perfection of quality and decorative value both considered—has built up snug fortunes for a goodly number of peach-orchard owners who have made themselves masters of its requirements.

Unlike the apple—the season-through fruit of the masses—the peach falls naturally into the class of bonanza farming when grown on an extensive scale. But, unless under the control of a master, it is uncertain in its behavior and returns its golden harvests only at intervals. In the hands of a novice the peach is apt to fulfill the Scriptural prophecy of providing "lean and fat years."

When undertaking to show how peaches are now being grown for profit, which also means for the pleasure and satisfaction of the producer and for the consumer as well, I feel sure I can make the essentials for success in peach-growing stand out most clearly by giving first some negative testimony by introducing the experience of my friend Jackson, who began his peach-growing career by investing $1,000 of his own money and several thousand more furnished by a number of his friends, pooled in a peach-orchard enterprise.

These partners, in their innocence, had casually observed some big peach-growing operations and learned what a single year's fabulous income had been. None of the partners, of whom Jackson was the active head, had any practical or expert knowledge of peach culture. Their assumption was that good, productive bottom land that produced bumper crops of corn, potatoes, and truck would be equally good for peaches, and that the high valuation of such fertile land was a guarantee of their future peach-orchard profits when their trees should come into bearing.

In keeping with the selection of their peach farm site, their peach varieties were chosen from bargain-counter displays of seductively colored pictures of "new and improved" sorts. The young trees, as it turned out, were infested with insect pests and infected with serious diseases, but were set without treatment, and of course lasting trouble and loss were their heritage.

As the several years passed between the setting of the trees and their natural fruiting stage, their orchard ranks were decimated by predatory insects, rodents, rabbits, fungous diseases, winter-killing, the latter damage being due to the lack of proper water and air drainage. When the fruiting age arrived, of the remaining trees still surviving all too many produced fruit inferior in color and size instead of the rich yellow and ruddy hues that the market demands. Then came to these peach-orchard partners the full import of the failure that their blind unpreparedness had brought upon them.

Now for a brighter companion peach picture. One such lesson was enough for all but Jackson. He pulled himself together and took full account of their failure. He knew that others were developing young peach orchards into profitable sources of income. He determined to start again, and start right, and make the peach refund his losses and furnish a good revenue besides. Jackson's ambition to possess a 100-acre peach orchard had by that time dissipated, and his motto became, "Be sure you are right before going ahead."

Instead of beginning again at the bottom, he looked for a peach orchard nearing fruiting age that he could buy. When found, he was taken aback by the extreme figure at which the orchard was held—$5 a tree with the land thrown in! But so prepossessing was this peach-orchard prospect, Jackson felt he could not pass it by, since the best peach authorities agreed that the land, its location, drainage, peach varieties, and cultural development were all that could be desired for a safe and certain peach production.

He found that the trees had been kept free from insect and animal depredations, no serious peach diseases had injured them, and the variety allotments were such as to allow a continuous supply after the first ripening until the season closed.

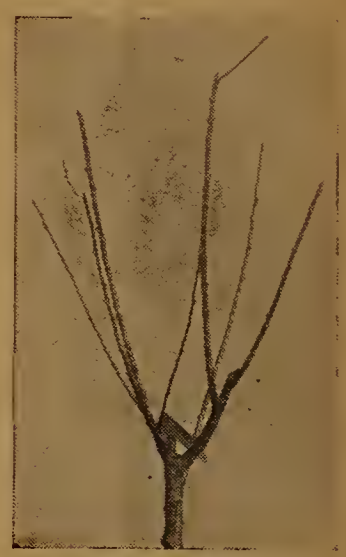
"Best Sellers" a Necessity for Profit

HERE is the list of commercial varieties he found all ready for production in the orchard he decided to buy, which is located within the zone of frost-protected territory near Lake Erie: Elberta, J. H. Hale, Champion (for near markets), Captain Ede, Smock, and Salway.

The site also had the additional protection from late frosts by a considerable slope which drained the frost-laden air away to lower levels. Another important safeguard from winter injury and lowering of the trees' vitality was a good natural drainage furnished by a subsoil stratum of gravel. This gravel also allowed the trees to tap a moisture reservoir underlying it, and thus furnished drought insurance as well.

All of these aids and safeguards which had enabled the orchard to be developed to fruiting age, with comparatively no loss of the trees set, had been understood by the orchard owner from whom my friend Jackson was buying what was already a "going" concern.

The grower of this orchard had made himself master of the peach-growing business, but he realized that the marketing of his orchard product to insure a profit was a serious matter with which he was not sufficiently familiar. Hence his willingness to sell.



Year after setting, pruned

Just here it is of interest in passing to know that Jackson, who blundered so seriously in trying to develop a peach orchard for himself and his partners, is proving that he is master of the marketing end of the business. With the aid of an experienced orchard helper he is keeping his orchard investment on the up-grade by giving vigilant attention to the health, growth, and general well-being of the trees.

For the help of others who are about to begin the development of a peach orchard, large or small, I will briefly outline how the orchard now owned by my friend Jackson was prepared for, planted, and cared for by its former owner. After carefully selecting the site already described, and which was proved to be suitable below the soil surface as well as above, the land was prepared for the young trees as carefully as for a field of potatoes or cabbage. Then with a large plow deep double furrows were thrown out 20 feet apart in two directions.

Thinned peaches outyield and outsell the unthinned fruit

At each intersection a sufficient charge of dynamite was exploded to make a hole amply large to receive the tree roots in their natural position. At the same time the subsoil stratum overlying the sand and gravel at a lower level was shattered and loosened to allow the young trees' roots to penetrate and expand with less resistance. Nor were the benefits mentioned all. The plowing and blasting were done the fall previous to planting the trees, and the action of the frost and leaching down of moisture furnished a perfect environment for the newly set peach trees.

During the winter, while the frost and moisture were doing their work, the trees were ordered with careful description as to size, age, and variety. But this was not enough. This peach-growing expert knew that the trees to be planted in his 25-acre peach orchard meant much for the success or failure of his undertaking. He therefore notified the nurseryman that he would be on hand in person to see the selection of his trees made, and for that purpose made a journey of a hundred miles. We can be sure his trees were free of all defects and diseases, and that there was [CONTINUED ON PAGE 30]

SAVE! TIME LABOR MONEY AND BUTTERFAT AS A WARTIME ECONOMY

Never was there a time when it was so important that you get every ounce of butter-fat. Never before should you save as much time and labor as possible. With cream and butter commanding top prices you actually throw good money away when you waste the smallest particle of butter-fat by old-fashioned methods of separating or by using an out of date model separator.

Get a Galloway New 1918 Sanitary Separator

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Sold Direct to You from My Factory My Plan that Saves You Money!

And the biggest thing about my wonderful New Sanitary, next to its perfect skimming qualities, is **that the price is right.** Yes, I know there are lots of separators at about the same price as mine and even less. But the Galloway is not to be compared with them. A too cheap separator is not economy. It's just as bad to pay too little as too much. My Sanitary is in the class of the best machines, but is sold at a fair price because you can buy one direct from my immense factories at Waterloo. This plan saves you the difference between my price and the price of the high-priced separators. I cut out all waste and sell you at the rock bottom factory price. You get your new Galloway Sanitary right fresh from my factory floor. Thus you buy in the most economical way—the modern way of doing business.

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Do this at once. Get the big spring edition of my 1918 Catalog. Find out how much you can save when you buy direct. And not only on Separators, but on Spreaders, Engines, Tractors, and other implements as well. Here is proof that my Sanitary Separator does all I claim:

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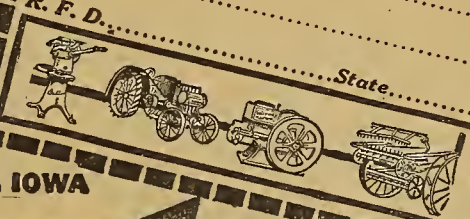

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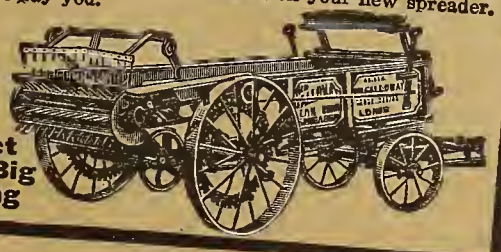
Here are some new features that make my No. 8 the best of its kind and lightest in draft: patented roller feed; steel beater; V rake; automatic stop; uniform clean-out push board; steel tongue; double chain drive; spreads from four to twenty-four loads per acre. Get these Galloway improvements on your new spreader. It will pay you.



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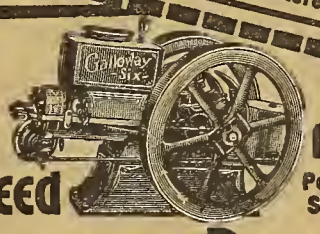

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MARCH 1918

Just Before Spring

OF ALL the periods of the year late winter is the one in which the countryside appears least inviting. It is the slovenly season—at least, so it seems to the man or woman who cannot in imagination picture the to-morrow when a sleeping world shall leap into life.

Brown and bedraggled is the landscape, faded the grass of the fields, and bleak and bare the trees of the forest. About all outdoors there is a somberness and a sameness that is far from inviting. The browns that predominate are not the rare, warm colors such as characterized the early autumn. There is only a faded garment where once was a gorgeous raiment of gold and rich browns.

The patches of snow that lie along the shaded roadside where were great drifts, or spot like a leopard's hide the sheltered slopes, are not white as once they were. Even they are dirty and fail to relieve the dreariness.

Everywhere there is lack of color, and apparently decay dominates. But—joyous thought!—it is only the rest before the resurrection. A little while and we shall look upon a new world, a world pulsating with life and pregnant with promises. In the to-morrow month we shall, following the first rains that somehow wash away much of earth's ugliness, see springing from to-day's mud a carpet of green.

This carpet, woven from Nature's loom, shall proclaim the coming of a new season, a season of song and of gladness. Then shall there be a new earth. This earth the man of vision sees even in the just-before-spring somber season when Nature's garments are dull and bedraggled.

A Time for Courage

WHATEVER happens in this war, the worst is over. Come what may, we shall not see another such crisis as the Marne. We have to hold to win, to hold where the line has never been broken.

All military observers, our own as well as those of the enemy, agree that Germany will presently try to obtain a decision in the West. That to her three great offensives—the first wrecked at the Marne, the second blocked at Ypres, and the third smashed before Verdun—she will add a fourth, intended like the others to break through.

What are the probabilities of a German success in this great offensive? The German always has a chance to win a battle; when he had everything in his favor at the Marne, he failed; when he had ninety chances out of a hundred at Ypres, he failed; when he had a three to one chance at Verdun, he failed.

In his fourth great attempt he will not have more than an even break, and he will have to break clear through to get a decision. If he doesn't he will have to abandon the offensive for good, because by the spring of 1919 we shall have such numbers of troops in France that the Allies can overwhelm him.

Every German newspaper and magazine is making a loud noise in an attempt to shake the nerves of the Allies in advance of the attack. This method is not proof of supreme confidence.

When the German attacks he is going to gain ground; this always happens in a big offensive. There isn't any doubt that along with this offensive the German will throw huge numbers of men against the front held by American troops. He has done this with every new army as it took its place in the line.

While there are going to be some tense, and critical, and sad days ahead, the people at home can well afford to borrow some of the confidence of the boys in the trenches revealed in Tommy's familiar lyric:

> We beat them at the Marne,
> We beat them at the Aisne,
> We gave them hell at Neuve Chapelle,
> And here we are again.

The Old Oaken Bucket

MANY a town in the older parts of the country—New England, New York, Virginia, Pennsylvania—has a town pump about which the memories of generations linger. Perhaps there is an inscription on a tablet near-by which tells how a battle was fought in the adjacent square and how, afterward, the defenders of the town washed their wounds in water from the old pump.

There is likely to be another sign, however, reading something like this: "Do not drink water from this pump. Dangerous."

The old oaken bucket likewise has many fine memories hovering about it. There is no memorial tablet, but the memories are there just the same. There is no sign of warning; but there ought to be. The old oaken bucket draws water from an open well or from a cistern. Without filtering such water it is unfit to be drunk.

Typhoid fever and other diseases are communicated to a large extent by means of water. These diseases, constantly diminishing in the cities and towns, are still prevalent in the country. Cities and towns are protecting their water supply, and are insuring its freedom from harmful germs.

We owe it to ourself and our family to see that our water supply is likewise healthful. The same sentiment that leads to the preservation of the old town pump may keep the old oaken bucket; but it should be kept for sentiment's sake, not for use.

To Get Large Yields

NOW comes the 1918 farming season, which is the most important one in the history of our country. The responsibilities that are laid upon us are the most momentous with which we have ever been entrusted. If our fields fail, all may be lost. The nation realizes this. Big business is conscious of it. Great activity is urged. On every hand advice is offered. Much of this advice is good; all is well meant, but not all is practicable.

In times of national crises when food is scarce a natural tendency is to encourage intensive cultivation too far. It is well to remember that while the war has taken hundreds of thousands of our workers it has not taken one acre of our land. The land is all here, but the problem is to crop it.

We cannot indefinitely increase the yield on a given number of acres merely by doubling up the horse power and the man power. Two teams and two men will not ordinarily cause a 40-acre field to produce twice the harvest that would result from the work of one team and one man.

Our aim this year must be to get the largest possible total yields, not necessarily the largest yield per acre. The man yield must necessarily represent the real measure. This will lead to the use of better tools and equipment, the substitution of larger for smaller teams, the purchase of tractors, and more general use of fertilizers. The nation is interested, not primarily in the product of the farm, but in the surplus from the farm.

Another bit of frequently repeated advice is for us farmers to pattern after big business—to go at our work on a very extensive scale. Those who so advise us apparently forget that farming is necessarily a business of small units, and that unexpected changes of weather occasion unexpected and almost instantaneous changes of the whole work on the farm.

So, even under the stress of war, radical changes toward either record acre yields or farming on an unusually extensive scale should not, as a rule, be encouraged. The best farmer—he who at the end of the season is able to show the largest surplus—is apt to be the one who merely improves upon the methods with which he is familiar.

No, It's Not All Velvet

WITH the value of the field crops and the animal products of 1917 officially set at $21,000,000,000, the impression is likely to get abroad that the farmer is enjoying excess profits to an extent which the steel magnate and the munition maker never dreamed possible. But the truth is that it is not all velvet to the farmer, even with corn and wheat and hogs at the high prices they are nowadays.

While the value of farm products has been soaring, the value of practically everything the farmer has to buy has been ballooning over the prices of the things which he raises and has to sell. For instance, before the war steel sold for $30; it now sells for $130. The effect is felt in the price which the farmer must pay for all his implements and tools.

Within the last two or three years coal has advanced in price from 100 to 250 per cent, wire has gone up 100 per cent, wagons are selling for 40 per cent more than they used to, prepared foods have advanced 100 per cent, fertilizers have risen in price 600 per cent, and so on. Binding twine has advanced from 8 to 18 cents. Plow shovels that were bought for $2.50 before the war now cost $7. Cultivators sold at $28 before the war, and now sell for from $50 to $55. Even seed has advanced outrageously, and will bring an unheard-of price this spring.

The farmer is enjoying unusual prosperity. He is raising bumper crops. He is getting good prices, something like the prices he has long deserved. But if any city man thinks it is all coming in and nothing going out, he has another conjecture. The farmer is paying the toll of the war—as much as any other man, if not more.

How They Don't Grow

THE old nursery rhyme, remembered by every boy, is still true in its assertion that

> You nor I, nor nobody knows
> How oats, peas, beans, or barley grows.

The farmer to-day, however, and his boy know how oats and barley, at least, do not grow. They know that a good crop cannot be expected from smutty seed, and that smutty seed is common all over the country.

Anyone who has tried it knows that it is no more trouble to treat seed for smut than to test corn for germination. A pint of formaldehyde to about forty gallons—preferably forty-five for oats—of water makes a first-class dipping solution, and it's a sure thing for oat smut and for the covered smut of barley. Nothing is a sure thing for the loose smut of barley, but the treatment helps even in this case.

Of course, the shrewd, careful person tests his seed before treating it. All seeds cost money—plenty of it—this year, and no thrifty person wastes his money.

Besides, with European farming badly shattered by the war, the United States will probably have to produce more than a quarter of the world's crop of oats, and pretty nearly this proportion of the world's crop of barley, if she is to do her duty by the world.

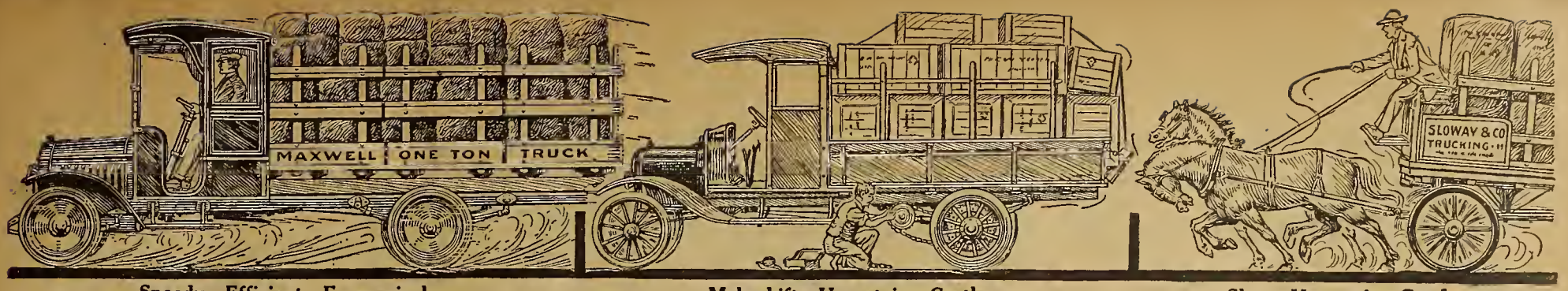
If You Buy Now

WITH war conditions affecting manufacturing and transportation of every sort, it is doubly important this season to do your spring buying early. There is a shortage of some articles you will need. The process of getting any of them to you, whether there is a shortage or not, is bound to be slow. Deliveries cannot be expected with the same promptness that was customary before the United States entered the war.

Seeds, machinery, and implements of all kinds, binder twine, insecticides, fertilizers—all these and other things should be ordered in ample time. It will be worth while to sit down and make out a list of the articles that you are sure you will need this season, and then order them at once.

High prices should not keep you from buying the quantity or the quality of goods that you are in the habit of buying. These necessities cost but a small proportion of the value of the products.

To economize on them is false economy. It will reduce your production, and whether from the financial or from the patriotic standpoint, you can't afford to lower your production this year.



Speedy—Efficient—Economical | Makeshift—Uncertain—Costly | Slow—Uncertain—Costly

Be Cold Blooded When You Choose Your Truck —and Choose Now!

As a business farmer, you must have a truck. Don't postpone decision longer. Buy now while you still can get one. Don't wait until only the money-wasting makeshifts are left.

Be just as coldblooded as a traffic expert is in selecting the right truck. Base your choice on the same considerations as he does and you will be right.

This is the way the traffic expert would look on your trucking problem:

1. **Horse Service**—Always unreliable, limiting your scope and delaying you unexpectedly. Under present conditions growing more costly than ever.
2. **Miniature Truck**—¾-ton; too small for practical conditions, or for your ever-increasing traffic. Costs just as much to run as a good one-ton truck.
3. **Passenger Car**—Adapted into a truck by a makeshift attachment made by a firm that did not make the car. Sure to breed trouble. Hard to keep in condition. Hard to find and cure trouble. Divided responsibility.
4. **3-Ton Truck**—Over-heavy for everyday work. Wasteful unless always used at full load.
5. **Unproved 1-Ton Trucks**—Partly experimental. Not made of highest grade steel. Over-heavy. Uncertain as to service. Costly to operate.
6. **Standardized, Time-Tested Maxwell One-Ton Worm-Drive Truck.** Low first cost. Low operating cost. Complete truck designed wholly as a truck. Made of high-grade automobile steels. An engine which has proved its reliability in years of use on hundreds of thousands of cars under all possible conditions. Worm drive of the same type as on trucks costing $5,000. Completely enclosed drive, safe against derangement by the worst roads or worst weather.

Get the facts. Write us a letter. The more coldblooded your judgment in choosing your truck, the better we will be pleased.

The new and coming conditions are changing the whole of the transportation experts' judgment as to what truck is most economical in operating costs as well as in first costs.

If you decide in time, you can still get one of these trucks of proved reliability and 100 per cent. efficiency; cash or easy terms.

There is a Maxwell dealer near you. But we have some new information that we want to send you direct. Send us a postal card today.

One-Ton Chassis, $985; Chassis with Cab and Windshield, $1025; Combination Box Body, $1035; Combination Box Stake Body with Cab and Windshield, $1075; Stake Gate Body with Cab and Windshield, $1080; Express Canopy Body, $1095. F. O. B. Detroit

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Maxwell Motor Sales Corporation

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MAXWELL ONE-TON WORM-DRIVE TRUCK

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GARDEN BOOK
for 1918

is an authoritative guide to all garden work for both vegetables and flowers. Cultural directions by experts.

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SEND 10c to cover postage and packing and receive this valuable collection of seeds postpaid, together with my big, instructive, beautiful Seed and Plant Book.

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BEET, Crosby's Egyptian, best, sweetest early sort.
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CUCUMBER, Emerald White Spine, great favorite.
LETTUCE, Cream Butter, tender, popular heads.
MUSKMELON, Sweetest Gem, best garden melon.
WATERMELON, Deposit Early, earliest, sweetest.
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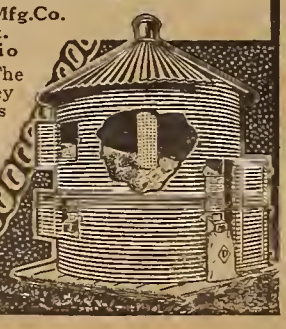


The Seed-Corn Crisis

By M. G. Franklin

THE corn-belt farmer is not more superstitious than his brothers in the wheat belt and the cotton belt. He will pass under a ladder tilted against the barn without ever thinking of bad luck. A black cat crossing his path does not worry him. He knocks on wood occasionally, but usually for the purpose of seeing if the tree is sound. It was only when October 5, 1917, fell on Friday that he realized for the first time that Friday had been his Jonah day all his life, and decided there was no use trying to buck a Jonah. For on the night of Friday, October 5th, there came a killing frost, far ahead of its usual time, and the corn-belt farmer had not gathered his 1918 seed corn in anything like the quantity that he should.

Growers became frightened enough to hold some old corn for seed

There is no disguising the fact that the seed-corn situation is serious, more so than ever before. But, on the other hand, there is no need in maintaining that it can't be met.

The fall of 1917 found the farmer in the corn belt enjoying a prosperity such as he had never experienced before. A couple of instances will suffice. On July 24th, A. J. Calderwood, a farmer living between Traer and Dysart, in Iowa, hauled a load of corn to the latter town which the buyers said was the largest load ever hauled to that market. In return he received the largest check ever paid there for one load of corn. The load weighed 101 bushels and 44 pounds; the check was for $164.70.

On October 28th, James T. Wolcott drove into Monroe, Iowa, with a load of corn and took back home a load of money. He had 102 bushels and 40 pounds. He took away $225.65. Mr. Wolcott's load of corn weighed less than a bushel more than Mr. Calderwood's; he received over $60 more. The price of old corn was advancing steadily; the corn-belt farmer was getting rich.

Now, most people can stand adversity better than they can stand prosperity. A good many corn-belt farmers are built that way. They have been taught, for years, to sling a sack over their shoulders and go out into their cornfields, along in September, and gather the seed corn necessary for next year's planting. But when old corn is bringing $2 and even $2.25 a bushel and the roads are good, why bother about the future? So the farmers kept on hauling their old corn to market, and along came Friday, October 5th, with its killing frost, and not one tenth enough seed corn had been picked to plant the 1918 fields.

A few tests soon convinced the farmers of the great mistake they had made. For Marshall County the Iowa Experiment Station tested 200 samples of 8,628 ears, selected from the fields of 17 farms after October 6th. They tested 54 per cent strong, 20 per cent weak, and 18 per cent dead. For Monona County, samples from 45 farms and containing 2,755 ears tested 56 per cent strong, 14 per cent weak, and 30 per cent dead. Subsequent tests in other counties showed a much more discouraging condition; in fact, these tests were exceptionally good.

Corn "Cripples" Fool Wisest

Individual farmers and seedsmen began to look worried. A veteran seedsman at Shenandoah telephoned one day to eight of the best corn-growing farmers in Page County, Iowa, telling them to bring in samples of the best seed corn they had gathered from their 1917 fields. These men know good seed corn when they see it (that is, they think they do, and they raise the most corn to the acre in their neighborhood), so they brought in their best ears and the seedsman tested it.

Here is a typical test of six ears of yellow corn and eight of white:

White			Yellow		
Strong	*Weak*	*Dead*	*Strong*	*Weak*	*Dead*
0	0	6	0	0	6
4	0	2	5	1	0
1	1	4	0	1	5
4	0	2	0	5	1
1	2	3	1	1	4
1	1	4	5	0	1
3	2	1			
6	0	0			

Nor was this all, bad as it is. "The most discouraging thing about it is that most of these ears are what we call 'cripples,'" adds the seedsman. "That is, they are not entirely dead, but near enough alive so that they would fool the average farmer of good judgment. Anyone can tell an ear that is frankly and positively dead, but the cripples will fool anyone. They will get worse as the season advances, and by spring all these cripples will probably be entirely dead."

The authorities agree that not more than 10 to 25 per cent of the seed corn necessary in Iowa was gathered before that fateful Friday, October 5th.

Another seedsman is not quite so optimistic. He says: "My impression is that about 50 per cent of the farmers will plant new corn for seed next spring, but any that plant it without single-ear testing, as the majority of them will do, will have no stand at all."

Another seedsman believes that the old corn is almost the only solution of the problem. "My positive opinion," he states, "is that what little old corn there is left in the country is all that stands between us and a crop failure in 1918. The old corn is all good. I have yet to find a single lot of old corn that does not show high germination. One lot I recently tested gave 95 per cent strong, 1 per cent weak, and 4 per cent dead. That was an average sample."

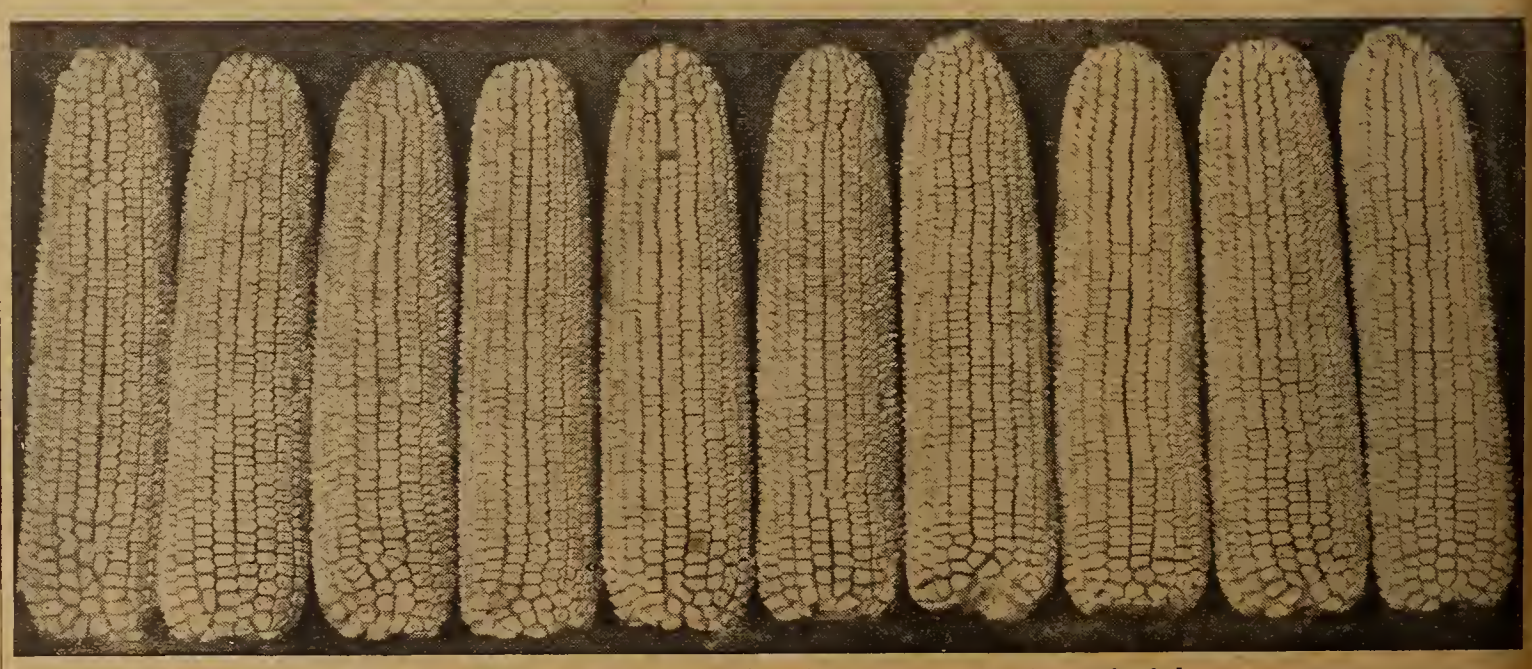
With the situation as outlined, what grounds are there for asserting that it is not irremediable?

Two avenues are open to the farmer who wants to "do his bit" by raising at least an average corn crop in 1918. The first lies to the crib where the old corn is stored; the second still remains the cornfield with its 1917 crop. If 10 per cent of the necessary seed corn was picked before Friday, October 5th, and 50 per cent can be secured from the old corn, there remains 40 per cent for the 1917 crop, after the October freeze, to supply. All through November and up to the middle of December farmers were being urged to lose no time in getting out into their fields and picking from five to ten times as much seed corn as would be needed for planting in the spring. The farmer who would need 15 bushels of seed corn was urged to pick from 60 to 150 bushels; then to hang it up and dry it out thoroughly. From that amount it is confidently believed the necessary 15 bushels can be secured.

And so the situation, while bad, is not completely dark; one need not be the son of a prophet to predict that there will be no crop failure in the corn belt in 1918. Seed corn will be high-priced. It sold around $4 last year; it will be much more this spring unless the price is regulated. Some States have fixed the price of seed corn at $5 to $7.50.

The corn-belt farmers are being scared into activity; not needlessly, hopelessly scared, but just frightened enough to cause them to hold on to what is left of their old corn, to buy seed corn near home wherever and whenever they can, and to select more than plenty of apparently good ears to be tested out.

Corn is king in the corn belt, and there is little likelihood of its being deposed within the next year. At the same time, never was the reign of the monarch of the field, like the monarchs of nations, so uncertain.



Some States have fixed the price of good seed corn at $5 to $7.50 a bushel

How I Was Treated in Five German Prison Camps

[CONTINUED FROM PAGE 5]

prized article in Germany—an English newspaper. It was dirty, greasy, worn and torn, and the print was very faint, but it certainly looked the finest thing in the world to me. Papers from England are not allowed in Germany—not at least for the British prisoners, though the other nationalities can receive the papers from their native countries. Any that we receive are smuggled in by an underground method, of which I cannot say anything here, as it might deprive the boys of one of their few pleasures.

"How are you fellows fixed for parcels?"

We looked up from our all absorbing occupation to see another Englishman—the sergeant major in charge of the barrack.

"Sorry, but we have nothing at all," we replied.

"I'll soon attend to that. Come along with me."

Taking us to his room he gave us each a parcel of food. This had been collected from the other fellows. There was tinned meat, vegetables, fruit, milk, tea, sugar, biscuits, and some bread. He also inquired as to clothing, toilet requisites, and issued us the things we needed, from a supply sent out by the British Red Cross.

The boys in the camps are magnificent that way. A more unselfish bunch of fellows I have yet to met. They will share their last crust of bread, and there have been times when they have had to do it.

The boys always form what is known as a "mucking-in gang." A few fellows get together and put all their parcels from the Red Cross into a common fund. One fellow is elected to choose the meals and to be responsible. Each gang gets a Russian to do its work. The Russians, poor fellows, are always hungry, and only too pleased to act in this capacity.

We secured a little undersized chap of the same name as myself, Ivan. He was always singing at his work and repeating to himself English words. He was a splendid worker. He made our beds, washed the dishes and clothing, and did the mending. For this we fed him and always let him draw our rations of food when Red Cross parcels came and we did not need them ourselves.

The food in the camps is almost uneatable. The Germans call us *Schweinhund*, which means in their language "pig-dog," and the food is only fit for that brand of animal. For breakfast we got burnt acorn broth in lieu of coffee. Dinner was a bowl of soup. Sometimes it was made of potato peelings and water drawn from a peat bog, which turned what food was in it a dark color.

Sawdust Put in Bread

Again it was putrid cabbage or turnips, carrots, beets, or onions. Friday was a meatless day, and they gave us fish-head soup. Then at times we had preserved meat—very poor stuff. Again we have had grass soup. We had to be extremely hungry to eat some of these messes. The food was bad enough to look at and the smell was even worse.

Five and a half ounces of black prison bread was issued at four-thirty. This bread was not the ordinary bread such as is sold to the people, but a special bread prepared for the prisoners. It is composed of rye and wheat flour, potatoes (not potato flour), and sawdust. It is very bitter and will not keep. But then we fellows were very hungry and had to rely upon it when the bread did not arrive from Switzerland.

We were not allowed to light fires, so that all food that was sent out to us was already cooked. The Germans at the request of Mr. Gerard—which was before the United States entered the war—let prisoners have boiling water to make tea. If we had any food that required warming we paid the cook five pfennigs and we were allowed to drop the can, tied to a string, into the boiling water for a certain length of time.

We had to rely entirely upon our parcels. Without them we would soon have starved to death, like the Russians. These poor fellows have no one looking after them, and have to rely entirely upon the German rations, which are not sufficient to keep body and soul together.

These Russians are very patient. I have often wondered how they stood it. They are simply wonderful. At one time the Germans used to send the English and Russians out together, but they have discontinued this now. All the Russians require is a leader, and they get that in the English. As soon as the latter says, "*Nicht arbeiten*," the Russians say the same, and down go their tools, and they take the punishment and never complain.

We all had to work. The British authorities gave permission for us to work in civil occupations. At the start the Germans did everything possible to force prisoners to work in munition works. Some of our fellows have been shot and bayoneted, while others have been imprisoned or starved, but the Germans have not succeeded in forcing them to work in munition plants. They work on farms or in factories, and on railroads, canals, and roads. They are paid seven cents a day. At the same time they destroy as much as they possibly can.

No Amusements in Camp

Prisoners are allowed to write four post cards and two letters a month. Everything is heavily censored. It is not even safe to tell about the weather, as it might be giving some information about the Zeppelins. Incoming mail is very irregular and also badly censored. There is little or no amusement in the camps other than what the boys provide for themselves. Some of the camps have moving-picture theaters, but these are seldom in operation, usually because the camp is being punished for some alleged offense.

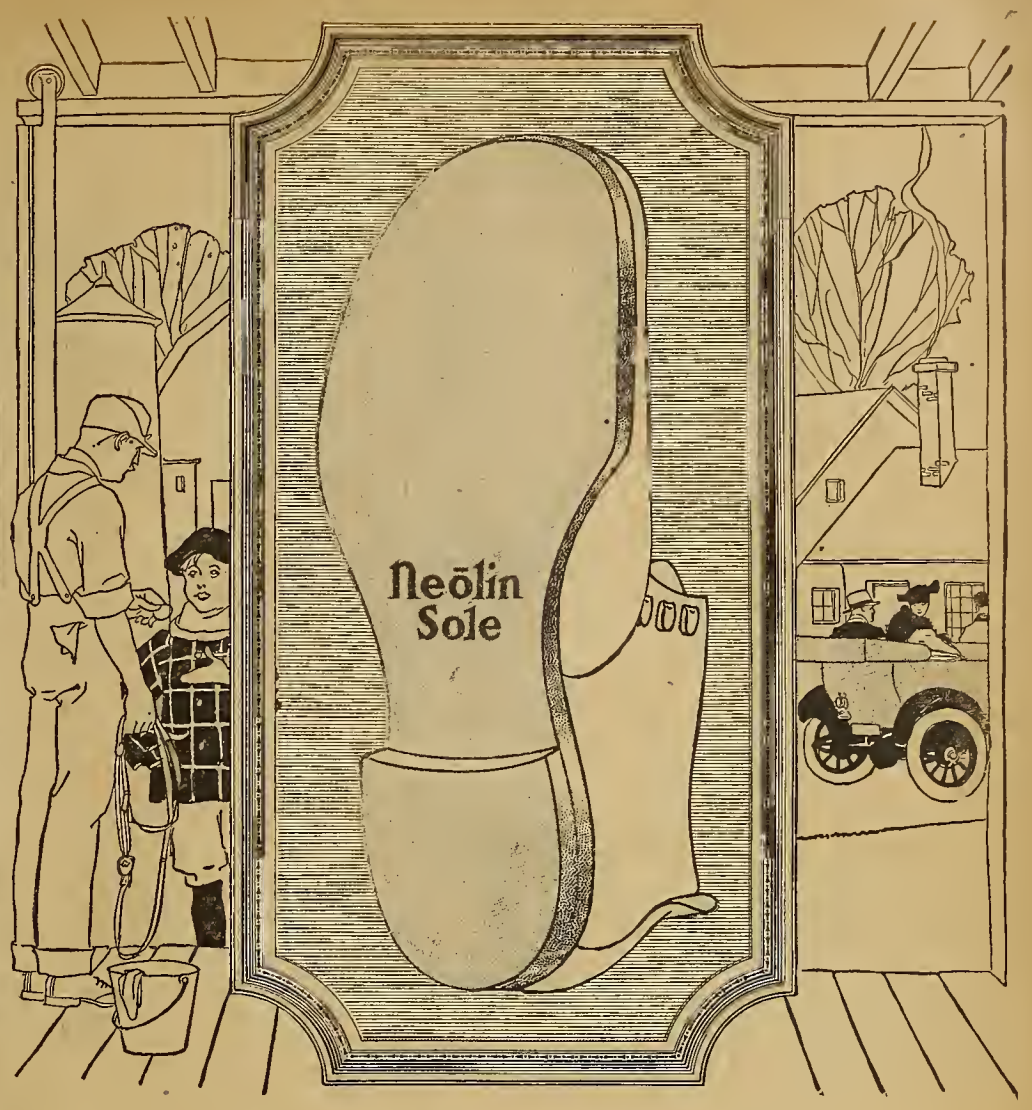
The Germans are frequently very brutal to their prisoners. A sentry uses his bayonet first and inquires afterward. He will never be punished for anything that he does to prisoners.

For example, a party of English had been sent from Celle to work in a salt mine. This was all right, but it was very hot down the mine—so hot that the boys removed their shirts. The fine salt dropped from the roof upon their bare backs, causing large open sores. At last they were sent into Celle for medical attention. They were kept there for four days. The doctor couldn't or wouldn't do anything for them, and they were sent back.

Upon arrival at the mine the boys refused to go down. So the German sentries charged this defenseless crowd with fixed bayonets. One of their number was killed, and the rest were forced to go down the mine again. These fellows I knew personally, and they came into Celle while I was there.

Without the aid of the Red Cross we would never have been able to stand it. They sent out one parcel of provisions a week, including two loaves of bread from Berne, Switzerland. They also send a complete outfit of clothing twice a year, an overcoat every year, and blankets. The winters are usually extremely cold and sufficient covering was not issued to us by the Germans.

Celle Lager was not the only German prison camp that I came to know intimately, but conditions there were typical of what I found in four other camps—at Soltau, Hamelin, Hannover, and Aachen. Just as we had been passed from hospital to hospital, we were sent from one camp to another. This puzzled me greatly until one day when we were being taken from one camp to another, and the crowds of German citizens cheered wildly at every station as the train passed, I asked a guard why we were given such ovations. He answered that we were "new prisoners just fresh from the Somme." Then I understood that we were transferred from one place to another simply to deceive the German people and to make them think their army on the western front was taking huge numbers of prisoners.



How to Save on Shoes

Probably you have found that you *get less wear* than you used to get out of the leather soles on average shoes.

So, very likely, it has cost you more than it ever did to keep the family well shod.

But it doesn't *need* to cost more—for you can get Neōlin Soles now on shoes for the whole family.

And these soles *wear so exceedingly well*—much better than most leather you get nowadays—that they are *bound to save you a lot of shoe money* every year.

Moreover, Neōlin Soles are so flexible that shoes soled with them are *easy as an old shoe* from the very start. They are *waterproof*, too, and they don't slip on ice as leather soles do, nor *wear slick*, in stubble.

Get Neōlin Soles on all the shoes *you* pay for—they don't cost a cent more. Get them on dress shoes and work shoes both. And, if you do your own re-soling, get Neōlin Taps.

But, in either case, whether you buy them on new shoes or for repairs, look for the stamp Neōlin underneath. If it is not there the sole is *not* Neōlin. *Mark* that mark; stamp it on your memory: Neōlin—

the trade symbol for a never changing quality product of

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The Comfort Car

IN pulling and climbing ability, the new Hupmobile is little short of phenomenal.

But your reliance on its flood of power is only the beginning of your *comfort*.

Already it has demonstrated an increase of no less than 24 per cent in gasoline mileage; more than 15 per cent in tire mileage; a surprisingly low cost of maintenance.

Add to this its superb steadiness, with riding ease that invites complete relaxation, and you will realize why this Hupmobile has actually given a new meaning to the word 'comfort.'

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Automobiles

Odd Uses for Motorcycle

By Wm. E. Curley

WHILE a motorcycle is designedly a passenger vehicle, there are times when it can be used as a tractor. One day last summer I took my buggy to the shop to have the tires cut. Now, here in Maryland, the blacksmith does tire-cutting in his spare time. This means that, if he is very busy with horseshoeing, a vehicle may have to remain at the shop for days before being attended to. As the shop is a mile from home and without telephone connection, I slipped out on my motor one afternoon to see if the job was done; if so, I intended to lead my horse out and drive the buggy home. The buggy was done, and a notion struck me to try to tow it home. I securely lashed a stick across the shafts near the end, dropped this between the saddle and tandem seat of the motorcycle, and the buggy traveled that mile faster than it ever traveled a mile before.

The previous winter a friend of mine, an old motorcycle rider, put chains on his tires, fastened a sleigh behind him, and took his sisters for quite an exciting sleigh ride through a fashionable speedway and park.

Garage and Workshop

By J. L. Justice

WHEN we built our garage, which is shown in the picture, the plan was to protect it from fire from without as well as within. The concrete foundation is eight inches above the floor, which is also concrete and slopes toward a drain in the center. This prevents the accumulation of oils and water in spots, and the floor is kept dry.

The metal roof is an additional fire protection, as it cannot catch fire if some near-by building should burn and shower sparks on it. We had a disastrous experience with fire which has shown some valuable points in reducing fire risks.

The garage was made 16x32 feet, with a rise of eight feet from the foundation to the plates. At first glance this may seem like a pretty large garage, but as we have two cars we find it very convenient. Before, when our friends came during bad weather, they had to put their cars either under the sky or in the barn. There is plenty of room in this garage for four large cars, with enough space left to fix tires and make small repairs.

The common fault is building the garage too small. The difference between a garage that barely houses one car and one that is large enough to have some convenience is so greatly in favor of the larger building that a person is not justified in considering the small additional cost.

The doors open on a patent bird-proof steel track. Sliding doors are easier to operate and more serviceable than swinging doors. There are six windows in the garage, the two in front being concealed by open doors. A four-foot door is in the rear. In the back end is a bench and chest of drawers extending nearly across the end. In the chest are kept oils, jacks, waste, old and new tubes, and various tools.

The cost of construction is summarized below. The native stuff was cut on our farm and cost $6.50 per thousand to have cut and sawed, which was done at the same time material was sawed for a new barn.

Native Stuff, Framing Material	
34 rafters, 2″x5″x11′	306 ft.
8 joists, 3″x8″16′	256
52 studding, 2″x4″x8′	312
6 sills, 2″x6″x16′	96
Sheathing	400
	1,370 ft.
Sawing cost at $6.50 per M	$8.90
Siding, 1,150 ft. at $31.00 per M	$35.65
Nails, hardware, glass	12.03
Metal roofing	26.90
	$74.58
Foundation and Floor	
Cement	$16.40
10 yards gravel	10.00
Labor for cementing	13.50
	$39.90

Carpenter's labor for building and putting on metal roofing was $35, which made the total cost $158.38.

An automobile canot be properly cared for when kept in a barn or dark shed. Besides, there is danger of fire in handling oils and gasoline about buildings where there is litter.

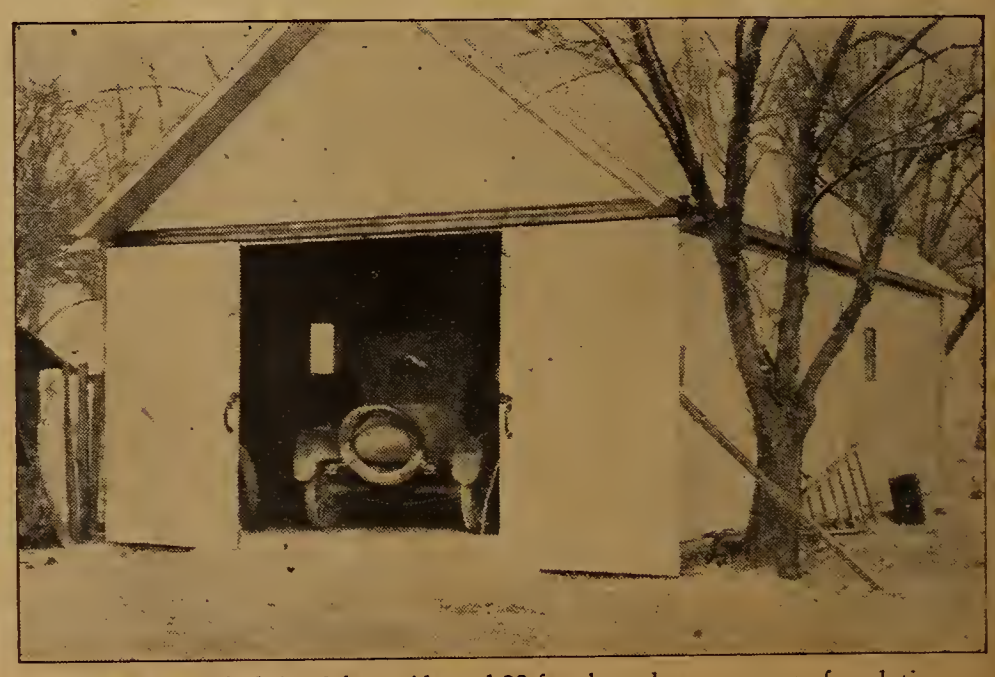
Gas Line Obstructed

THE vacuum tank is a very valuable improvement in its promptness and efficiency and in its saving of carburetor adjustments. Even an amateur motorist can learn the few simple remedies which will keep the vacuum up to perfect service.

Should the motor stop suddenly without seeming cause, as even the best of them will do sometimes, first examine your vacuum strainer. You will probably find an accumulation of lint or old rubber particles through which it is impossible for the gasoline to pass.

Remove the obstruction and clean the strainer with "gas" and, presto, off you go. However, should there still be no response from your motor after the strainer has been cleaned out, detach the pipe line leading from the gas tank to the vacuum and blow it out with compressed air, or your pump if no stronger pressure is available. Very often the line is stopped up with pieces of the rubber hose which is used at the garage to fill your tank. I have taken half an inch of hose from my gas line more than once.

With a gravity feed line, a choke-up may often be relieved by putting the mouth to the opening of the tank and forcing the gasoline on by the pressure of the air from the lungs.



This garage, which is 16 feet wide and 32 feet long, has a concrete foundation and floor and a metal roof

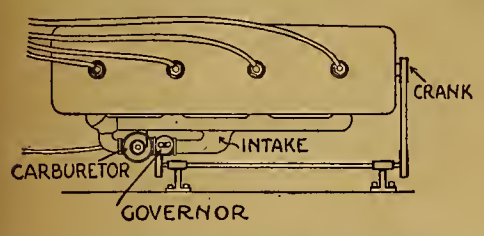
Machinery

Working the Car's Engine

By A. O. Choate

THE first thing to do when remodeling an automobile engine for stationary work, such as sawing wood, is to increase the size of the cooling tank, as the radiator on the engine is not the proper design for stationary work, being too small to keep the engine from becoming overheated while it is in operation under a heavy load. Get an old barrel, put a piece of galvanized screen over the top, and fill it with the cooling water. Then connect the barrel to the circulating system, taking the water from the bottom of the barrel just the same as the engine did from the radiator; then pump it through the water jackets of the cylinder and let it fall on the screen and back into the barrel.

It is better to put a throttling governor on the engine than to attempt to control the speed as it was controlled on the automobile, because the operator of the automobile was always at his post to care for the variation in the load properly when there was any variation.



The engine as it is being used for stationary work will be left to take care of itself most of the time, and the variation in the load will be so great that it would require an operator for the engine to manipulate the speed control levers in order that the engine would not race when on a light load, and to give it the required speed for heavy work. In sawing wood, for instance, we may have a small stick to start with, and then instantly change to a dry, hard stick 12 or 14 inches in diameter.

Experience has shown that if a person uses a throttling governor instead of the hit and miss, the mechanical design of the engine will not have to be changed. If one were to put the hit-and-miss governor on the engine it would have to be sent back to the factory to be rebuilt, so that the exhaust valves would hook up when the engine was running without a load, and there would have to be a governor arranged in the fly wheel or in some other convenient place on the engine in connection with a governor attachment for each cylinder.

If a person does use a throttling governor it will merely have to be put on the intake manifold between the carburetor and the cylinders, and a belt wheel the size of the one on the governor shaft be fastened on the crankshaft of the engine, so that the speed of the governor will be the same as that of the engine.

Will You Need Repairs?

By Thomas J. Harris

IMPLEMENT dealers will not keep as large a stock of repair parts for farm machinery the coming year as in normal times. Machinery and repairs have risen in price, and the merchants will not invest more money than usual, with no certainty of being able to dispose of the goods.

With breakages to replace and the possibility of having to wait for a shipment of your order from the factory, unpleasant situations will develop. The machines will have to be idle, and valuable time will be lost.

The implement dealers and manufacturers are planning a campaign on the six days beginning March 4th. They ask the farmer to make a list of the repairs that he will probably need. This list may be made by an actual inspection of the machinery and making notations of weak or worn parts. As a valuable supplement to this list will be the notation of repair parts that you usually buy each year. And if you order something that you never use, the loss will be much less than had you been required to suspend operations until your order was filled at the factory.

BEST IN THE LONG RUN

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EXPERIENCE has taught agriculturists to trust standard products. A name and a brand, backed for years by good service of the goods and good faith of the maker, mean security in purchase and security in service. They safeguard against deceitful appearances.

Appearances were never more deceiving than in tires. Your surety in tires is the name and brand of Goodrich; for Goodrich, the oldest and largest rubber factory, has meant the *best* in rubber since the harvest days of the old "Buffalo Pitts" thresher.

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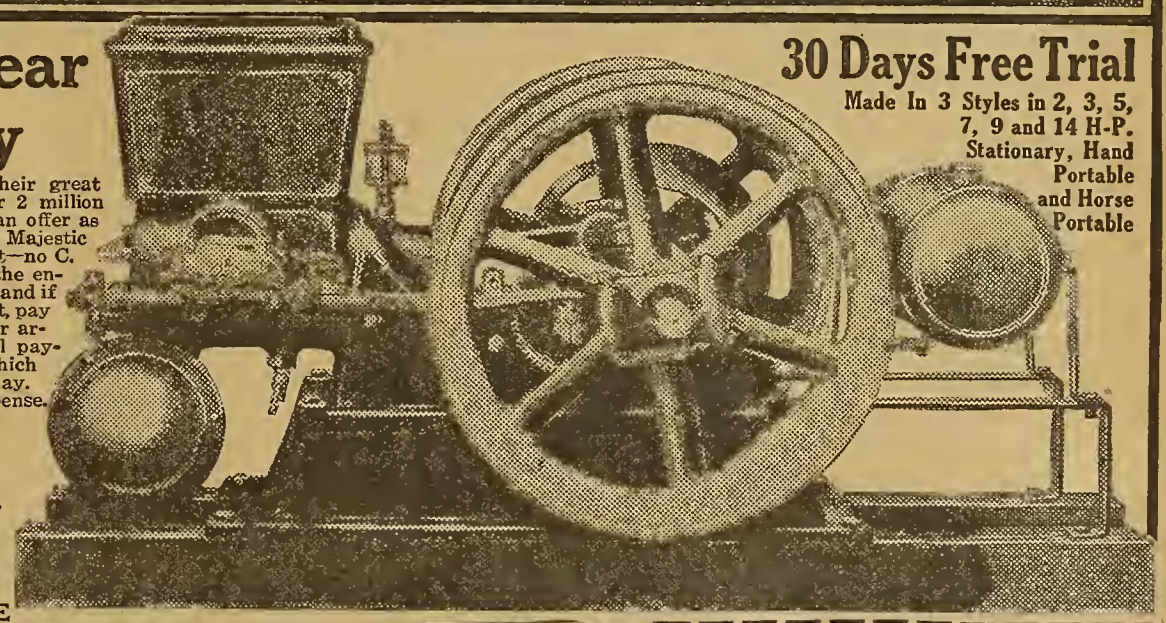

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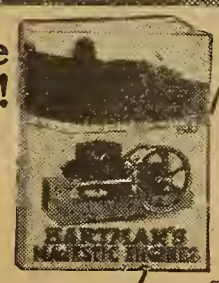

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And to deliver on this big contract you need the car more than ever.

AND it is important that the car be equipped with the tires that keep it going steadily, the year through at lowest upkeep cost. With Firestone equipment it is practically certain that your car will carry you wherever the work calls. They will get you there in comfort and on time, regardless of road and weather.

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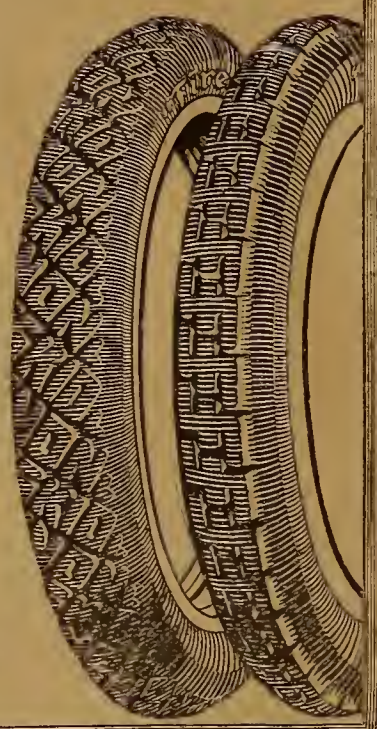

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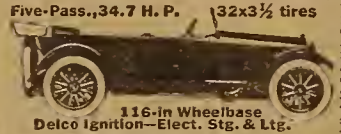

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Building

Locating the House

By William F. Miller

UNLESS conditions prevent, set your house so the entrance and the prominent rooms face the south. Then there will not be snow and ice in front of the house after the balance of the surrounding ground is bare.

The north side of the building is the coldest and receives little sun, consequently the snow remains a greater length of time on that exposure.

It must be understood that the location facing the south is recommended for the permanent home. If it is to be a summer residence you need not adhere so religiously to the southern exposure. The reverse will probably be more desirable, with the exception that the chief bedrooms, instead of being in the front, should face the rear, as the coolest breeze comes from the south at night.

If you have the means to maintain the attractive appearance of a long drive from the road to the dwelling, set the house well in from the main thoroughfare. Then you will be free from the dust in the summer when automobiles pass your residence. But rather than have a neglected approach to mar the surrounding beauty of the home, place the building closer to the pike and take the dust.

A Pretty Flower Tub

A RUSTIC flower tub such as is shown in the illustration is easily made, and is very inexpensive, nails being the only thing used in the construction for which money must be paid.

The legs or supports are simply six rough sticks of wood, crossed and held in position by braces and supports spiked on to them. The tub is made from pieces of wood 18 inches long and 3 inches in diameter. The stick is then split, and makes two staves. The upper end should be sharpened to add an artistic effect.

Gambrel-Roof Dimensions

Gambrel Roof

Gable Roof

THE proper pitch to give a gambrel roof troubles builders who are constructing one for the first time. Make the height one half the width of the barn. Give the first rafters a rise of one third the width and a run of one sixth. This makes the lower or steep part of the roof. Then give the upper rafters (above the hip) a run of one third the width of the building and a rise of one sixth.

In the case of a barn 36 feet wide, the top of the roof should be 18 feet above the plate, the lower rafters should have a rise of 12 feet, and the second rafters a rise of 6 feet. A gambrel roof gives not only a greater volume of storage room but the space is more accessible and permits a more thorough tramping of the hay along the edges.

The Confession of a Timber Buyer

[CONTINUED FROM PAGE 7]

of the countryman, and never on the value of the property. During the next ten days he introduced me to the people who lived on the miserable little farms that we passed as we rode through the company's 75,000-acre tract.

He also gave me the history of every man, woman, and child we met. He told me who was related to whom, a very important thing in dealing with the hill people; who was friendly to whom, and why. For example, the Hobsons, of whom there were ten or twelve families, "had it in" for the Cooleys because some twenty years back Jim Cooley had "done" Pete Hobson's wife out of an "eighty" which she had "heired" from her father.

The Goforths were not friendly to the Hobsons because of a matter regarding a trade for some sheep in which old man Josh Hobson had "put one over on" Uncle Ike Goforth. Also Uncle Ike Goforth had no use for his Brother Bill, and was apt to take violent offense at anything good he heard of Bill. And so it went. Truly, there were wheels within wheels, and at first Mr. Cooney's rambling talk meant nothing to me except a jargon of names and relations.

As we rode, however, I noted how careful he was to play up to the people we met, and to get information from one that would help him to make a sharp trade with another. He liked calamities especially. He played both ends against the middle more successfully than any man I have ever seen. Later I kept a careful note of all that the old man told me, and referred to it constantly when I was working up a trade, in order to avoid making any blunders.

By the end of the week my disillusionment was complete. All my previous training had been in forestry, and in a public service in which an important part of the work had been to help the small woodland owner to obtain a fair price for his timber.

[CONCLUDED IN NEXT ISSUE]

Farming with Less Help

[CONTINUED FROM PAGE 6]

would have had use of it on the farm for three years for $200, or a little over $66 a year, and still have the tractor and plows left. If kept in repair the outfit should be worth at least $200 on a trade or sale. These boys have been offered $450 for this tractor in a trade for a new one, but they say it is almost as good as new so far as the work it does is concerned, and they will not sell or trade it yet.

In arriving at prices per hour or day to charge for work done, the cost and wear of machinery other than the tractor was considered, thus making the earnings of the tractor nearly $5 for each ten hours of use. Prices will vary too, depending on the location.

When the silo filler or baling press is owned by one man and the tractor by another, the expenses are counted out and the balance divided. If help is furnished, each furnishes half, or it is counted in with the expense and balance divided equally.

For the man who wants the tractor for his own use only, it should last fully as long again, or even longer, as the rough moving in winter and early spring wears them much more than the regular farm work. However, the death of tractors on or off the home farm is hastened by misuse, by carelessness of the driver or owner, and we again repeat—better learn the "how" of it first, it will pay in dollars and cents.

As a proof of this we cite an instance near the tractor mentioned. A tractor of the same make and size was purchased some months later in the same year. The person who owned it trusted to the boys and other help to keep it going. The result was that the bearings were burned out and parts were broken, which made a total repair of more than $100. It was soon weakened so that it no longer would do what was expected of it when new. Later it was traded in on a larger one of the same make, in order to get more power. Like the first one, this too was misused and abused, and at present is in the shape of the first one when traded in.

Grip the Road with WEED Chains

Chained To the Road

That's what it amounts to when you use Weed Anti-Skid Chains. They have made the automobile an **all the year necessity** instead of an occasional passenger car.

Heavy, slippery, muddy country roads—almost impassable after rains—are responsible not only for thousands of automobile accidents and aggravating delays, but are **extremely treacherous** to life and property. Why not prepare for accidents before they happen—**not after.** It's wisdom to equip all four tires of your car with

Weed Anti-Skid Chains

Absolutely Necessary on a Farmer's Car

Slipping and skidding are entirely due to a loss of traction. Perfect traction on muddy, slippery, greasy roads is impossible without Weed Chains. Wheels equipped with Weed Chains automatically lay their own traction surface. Friction is effected **without affecting the tires** for they grip without grinding—hold without binding. They hold on like a bull-dog, always gain their ground, **prevent side skid** and **drive slip.**

No other device has ever been invented that takes the place of Weed Chains. They are the **only traction device** which can be absolutely relied upon at all times and under every road condition.

They Do Not Injure Tires

Because They "Creep"

Weed Chains ***do not*** injure tires even as much as one little slip or skid because they "creep," that is, continually shift backwards around the tire and thus do not come in contact with the tread at the same place at any two revolutions of the wheel. They are made of the best steel ***electrically welded and highly tempered.*** Sizes to fit all styles and makes of tires.

If you drive with chainless tires when the roads are slippery or muddy, you are taking chances with your own life, you are liable at any moment to have a serious mishap and you are risking the probability of aggravating delays. So stop at your dealer's and equip your tires with Weed Chains. Do it today—before it is too late.

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30 Days FREE Trial — Lifetime Guarantee

against all defects in material and workmanship. We ship you the size machine you need, let you use it for 30 days. Then if pleased you can make the rest of the small monthly payments out of the extra cream profits the separator saves and makes for you. If you are not pleased just ship the machine back at our expense and we will refund what you paid. You take no risk. Write for FREE Catalog now.

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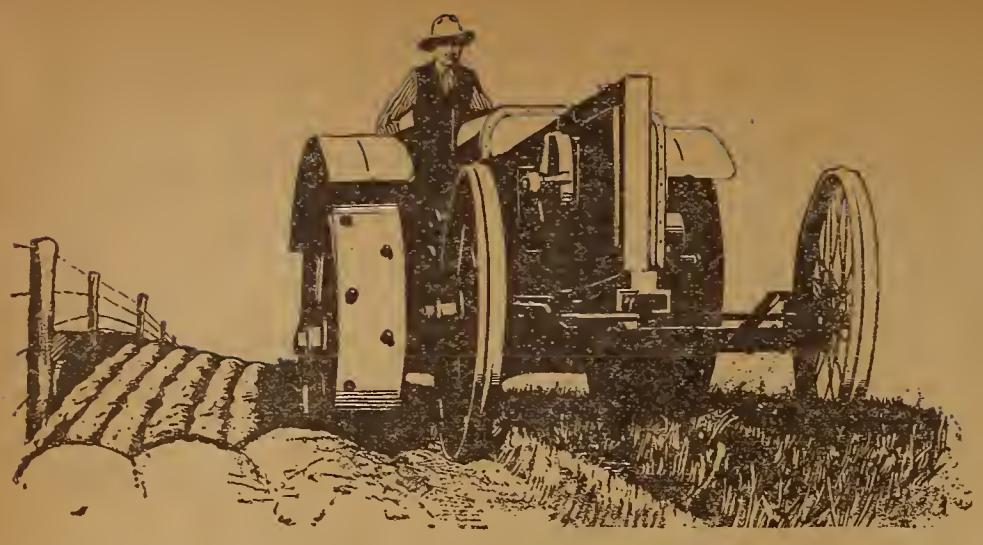

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For five years the Parrett has been tested and proved worthy under every conceivable condition of soil and climate, on the prairies of the middle west, among hills of the east, the arid regions of the Northwest, the ricelands of the south, in Canada, Great Britain, and France.

The Parrett is a one man tractor. It does the work of eight to ten horses, pulls three plows, will operate a 20 to 26" separator, burns kerosene and is so simple and easy of operation that a boy can do a good day's work with it.

The Parrett is made by a firm whose efforts are all bent towards making just one thing—the best tractor they know how to produce.

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Less Labor. E-B Self Lift feature enables one man to operate both tractor and plows. Compact design makes easier handling.

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Lighter Draft through E-B detachable shares which can be kept sharp and E-B thoroughly lubricated wheel bearings.

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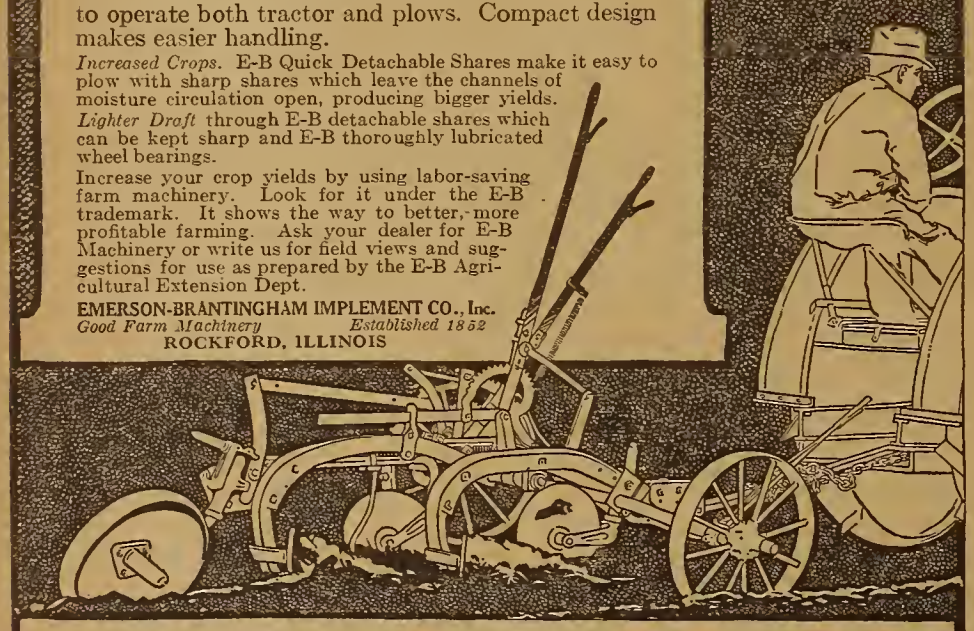

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YOUR PROBLEM—To increase crops with decreased help
YOUR REMEDY—E-B Tractors and Labor-Saving Farm Machinery

Closing Up Your School

By THE EDITOR

HOW many times you have said to yourself, "How I wish I had gone to school longer than I did! If I only had the time and money, how much I could learn now if only I had a chance to take a course at the agricultural college!"

And all the time you were going to the biggest, most up-to-date, and cheapest school ever known in the world. Every day of your life you were reading the newspapers, magazines, and periodicals, and no country has brought its press to a higher state of excellence than has America. This great, free public school, this great extension school, whose term is a lifetime, has been made possible only by one thing—the fact that in the early days Congress decided that newspapers and magazines should be carried at a flat rate of a cent a pound regardless of distance. In this way a few cents a year brought education and inspiration to the remotest homesteaders in our nation.

Now the Government is threatening to close up your graduate school, or at least cripple it so seriously that it will be easily accessible only to the favored few who live near the publishing center. In other words, only those who live in or very near New York will receive their magazines as they have in the past.

You who live in the South, in the Middle West, or on the Pacific Coast will have to pay three or four times as much as you have been accustomed to pay.

Furthermore, the new burdens will force many periodicals which have been making a slim margin of profit to close their doors. Thus millions of copies which bore information to their readers will be discontinued.

But it is not so much a question of whether an individual publisher or a group of publishers shall cease to exist: the important thing is that general information, national literature, shall be withheld from you.

It is certain that farmers are among the most regular and keenest readers of magazines and periodicals. Moreover, the agricultural press is one which makes the slightest margin of profit. Thus you, as an American farmer, will probably be affected more directly than any other class of men. It is largely because you have so long enjoyed free access to the great extension school afforded by the magazines and papers that you occupy the high place you do.

There is only one way in which you can stop a piece of legislation as vicious in its results as this. That is to write to your Congressman and to one or both of your Senators. This is all you will have to say:

"Senator John Smith, Senate Chamber, Washington, D. C. My dear Senator: I believe the zone system of second-class postage is wrong in principle, and that Congress ought at once to reconsider its action in the matter."

Our April Number

A FEW of the articles in the next issue: On the Way to Verdun, by R. B. Woolley; When I Buy My Next Car, by Thomas J. Harris; Our Farm's "Come Back," by Hilda Richmond; The Little Country Theater, by Ruth M. Boyle; Maple Sugar in the Making, by James Lampman; Trucks and Trailers, by Walter Hendricks; The Confession of a Timber Buyer, by John Calderhead; More Tire Mileage, by W. V. Relma; Apple Dollars, by R. E. Loree.

How Canada Met Her Farm-Labor Shortage

[CONTINUED FROM PAGE 9]

city women have tried in vain to persuade their maids to work in farm homes.

Ontario's situation, however, was particularly acute, and a wide-spread organization was effected to alleviate conditions. A province-wide scheme of labor bureaus, both rural and urban, was evolved, following to a considerable extent the methods of the British labor exchanges. Besides the head office in the provincial capital, six zone offices were established in six centers in the province. Each of the latter reported daily to headquarters. Connected with these zone offices are the branch offices of the Provincial Department of Agriculture. Each district representative, forty-seven in all, corresponding to county agents in the United States, thus became a labor agent for his county.

From the first it was clearly understood that additional farm labor would have to be secured from new sources, largely in towns. In 1916 the Ontario Department of Education passed regulations providing that all high-school boys, except those taking final examinations for teachers' certificates, were permitted, on passing a preliminary examination, to leave school any time between April 20th and May 20th, and receive their standing after three months' satisfactory work on the farm. In 1917 this arrangement was continued.

No feature had been more successful in Ontario than this. In 1917, 6,000 boys, ranging in age from fourteen to eighteen years, were employed at a minimum price of $12 a month, an average of $17 a month. Six Y. M. C. A. boys' secretaries were employed in following the boys.

Somewhat similar arrangements were made for high-school girls, university students, teachers, and leisure girls. In no case were they sent individually to farms. Camps were established under the supervision of the Y. W. C. A., principally in the fruit districts, where the girls were employed in large gangs picking fruit, hoeing, and working in jam factories. Approximately 4,000 girls volunteered for this important service at prevailing rates of wages. The girls proved such efficient workers that the demand soon exceeded the supply.

From factories many hundreds of men were persuaded to return to the farm for the whole growing and harvesting season. Some 10,000 men left Toronto alone for shorter periods varying from two weeks to three months.

Still further to overcome the labor shortage, 127 farm tractors, with all necessary equipment, were purchased by the Ontario Government and sent to work upon the farms. The first machines were bought in April, and the last in October. Altogether 20,000 acres were plowed and 3,000 acres cultivated, at a cost to the farmer ranging from $1.10 to $2.90. The demand far exceeds the capacity of the machines.

These were the principal lines Canadian effort took to meet the labor shortage in 1917. They will be still further developed in 1918. Yet with the best of organization and the most intense application by all they will not be sufficient. We reached in 1917 a point where voluntary service applied to military affairs was not sufficient. We have reached in 1918 a point where voluntary service on the farm is not sufficient. All bona-fide farmers are exempt from military service in Canada, but we must go further. We must conscript farm labor.

Proposals to do this are under consideration. It is suggested that classes of labor be drafted by the fairest and the least disturbing means. The classes suggested are: 1. Draftees in Canada in Class 1, unfit for military service. 2. Aliens of enemy nationality corresponding to the draftees. This can be accomplished, according to international law, only by the application of poll taxes when they are engaged in other industries. 3. The better types of men confined on industrial farms.

It is too soon to say with assurance just to what extent this compulsory service will be enforced.

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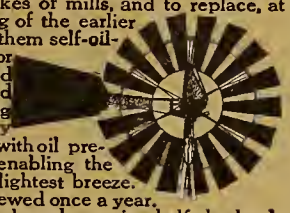

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Crops and Soils

Distributing Your Work

By M. N. Harrison

DIVERSITY of farm operations which makes possible the more equal distribution of farm work through the year has proved very profitable on many farms. Of two farmers having about the same amount of work, the one who does the greater part of it himself makes the greater profit. By distributing the work through the year it is possible for the farmer to do much of the work himself. The difficulty with single-crop farming is that it requires labor at certain seasons of the year.

When less wheat is sown and the land devoted to other paying crops, the work would not all be crowded into a comparatively short period. A combination of good crop rotation and a reasonable amount of live stock will give profitable work for the greater year than crop-farming alone.

A good rotation will distribute the labor throughout the crop season, and live stock will provide labor during the winter months. Such a type of farming

Selecting and shelling corn for the germination tests

has also the advantage of maintaining soil fertility and giving stability to the farming business.

A grass or legume crop, a cultivated crop, and a grain crop should be included in a good rotation. These crops do not all require work at the same time. The grasses and legumes furnish feed for the live stock, and may improve the fertility and physical condition of the soil. A cultivated crop furnishes feed for the live stock, aids in controlling weeds, and may be used for a cash crop. The grains crop provides a cash crop and feed for live stock.

A diversity of crops gives less chance for a complete crop failure. Some years the person with only wheat is extremely fortunate because the yield is good and the price is high, while other crops may have been a more or less failure. But other years the tables may be reversed and wheat may be a more or less failure, with corn and other crops making bumper yields. It is safer not to put all your energy and time in one crop. More diversification means more chances to have something to sell.

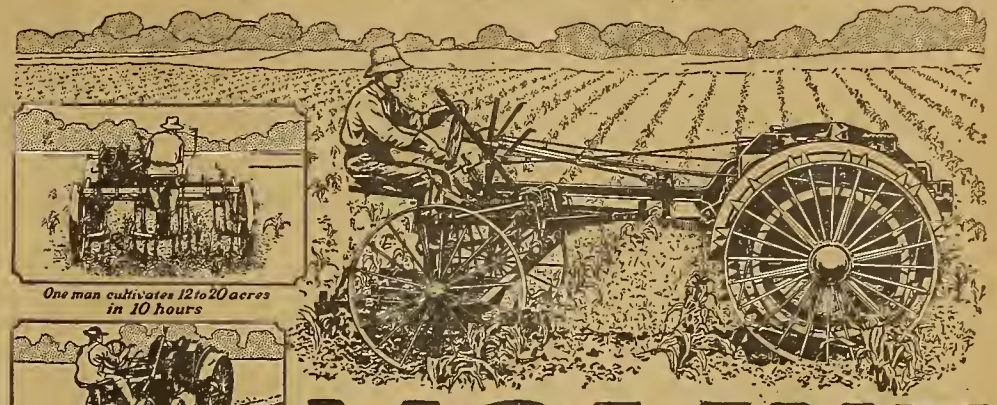
To Keep the Moisture

By John Coleman

THE soils of many States have more water now than they have had at this time of the season for several years. Everyone should see that it is kept there until the growing crop can use it. This moisture is more valuable to the plant than an equal amount of rain later. Practically all the water that is now in the ground can be saved by keeping the surface well tilled until planting time.

Cultivation should begin as soon as the land can be touched. This will prevent water escaping from the soil through evaporation. A two to three inch layer of tilled soil over the surface of a field forms a very effective lid to keep the water in the ground. The cultivator, the disk harrow, and the spike-tooth harrow or any other implement a person may have which will loosen the top soil may be used.

ONE MAN CULTIVATES TWO ROWS AT A TIME *with the*



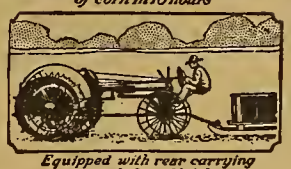
One man cultivates 12 to 20 acres in 10 hours

One man plows 5 to 8 acres in 10 hours

One man lists 12 to 20 acres in 10 hours

One man harvests 15 to 25 acres of grain in 10 hours

One man harvests 8 to 10 acres of corn in 10 hours



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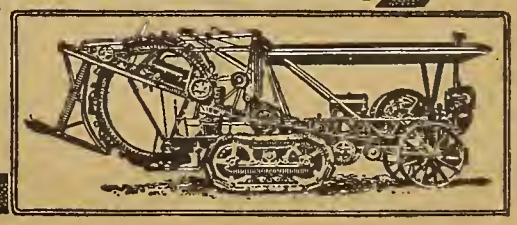

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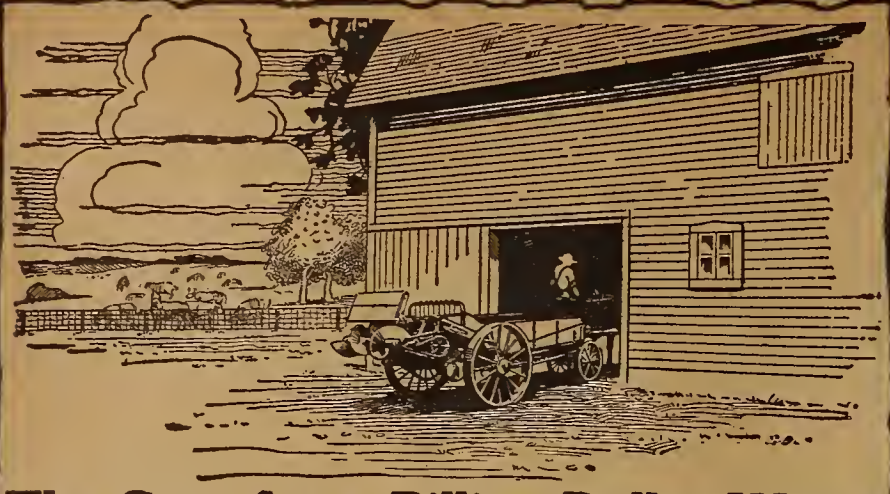

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Fertilizer and Lime

By THOMAS J. HARRIS

THERE are some ten or more substances that a plant needs to make it grow and produce its grain or fruit or forage. As a plant needs little of some of these elements we do not often hear of them. Others are much more important, because the plant uses them in larger quantities. Consequently the elements that are used most are the ones that are first to be exhausted and the ones that have to be replaced in the soil.

It is no secret what these different elements do when they are so dissolved and broken up that the plants can use them. Take nitrogen, for instance: It is a well-known fact that this element has a distinct action on the stalk of forage. If the soil is plentifully supplied with nitrogen, assuming that all the other foods are present, the stalks, stems, and leaf growth will be vigorous; but, assuming that the other foods are in the soil and in the form that the plants can use them and nitrogen is absent, then the plant will be dwarfed.

It is known that phosphates have the power of filling out the grain or fruit and making it plump and well formed. Potash has some of the effects of both phosphate and nitrogen, but it is more nearly like the former, for the effect is seen clearly in the seed.

These plant foods may all be present in the soil, yet not used by the plant. In such cases the plant food is said to be unavailable. "Unavailable," to many persons does not seem to tell the whole story. Many persons ask, "Just what do you mean when you say that food is 'unavailable' to a plant?" Probably the best answer is an illustration:

has been out in the barnyard for three months has lost from one third to one half its value. Do you know that the liquids of the manure contain one half the value of it? They do, and when rains fall on it, and the liquids run off in little rivulets, the farmer is losing his chance for a big crop. Even if rains do not fall on it, the juices drain or leach away, or may be lost after turning to gases. It is for the reason that the liquid manure is so valuable that much bedding is used. Of course, bedding is for the comfort and cleanliness of the animal, but the big thing is that the bedding acts as an absorbent and holds the liquid part of the manure.

What do you think the fertilizing value of the voidings of one dairy cow would amount to in one year? At present prices of fertilizer, much of which is off the market on account of the war, it is worth $77.25, according to the recent figures of an experiment station.

The Action of Lime

There is a common practice of throwing out the bedding of a morning and periodically hauling it out on the fields. It is interesting to know that a ton of fresh manure is worth twice as much as that which has been rotted. It should be hauled out before it has lost any of its value. The spreader is the most convenient way of handling it. It gives the evenest spread at the least labor and expense. For small grains, from 5 to 10 tons to the acre is considered about the right amount; but the amount must be judged by the condition of the land. If possible, work it in the soil and allow it

A spreader is used for distributing the lime

Suppose that you are hungry and there is nothing cooked, but out in the barn there is a bin of wheat. There is a lot of human food in the wheat, but you cannot eat it in that form and enjoy it, or, what is more important, get the most nourishment out of it. But grind it up, mix it with water, heat in a certain way, and a bread is made that you can eat and enjoy. Certain chemical and mechanical processes have made it so that you can use it, and your body will get the nourishment. The same thing may happen to plants.

How to Save Plant Food

The greatest common fertilizer is barnyard manure. If it is properly handled, it puts back a great amount of the plant food that has been taken from the soil. Some persons say that ordinary fresh stable manure, if hauled directly to the fields, puts back 80 per cent of the plant food. And no one has yet proved that the figure is placed too high. It simply means that you raise a crop of grain and feed it to your stock at market price and still have four fifths of the food that it took from the field. There is no other business that has the chance to sell its products and still keep them for future use.

Yet many persons—yes, the majority of persons—waste this rich resource. Some haul it out, but not until it has lost its value. A pile of manure that to rot there. It usually takes the second year for manure to show full results, while more immediate action may be had from commercial fertilizers.

Perhaps the war will teach us many things. We have depended on potash deposits at Stassfurt, Germany, but now that these supplies are removed from our reach we are going to use that which we have neglected for so many years. Nitrogen may be had from the air, phosphorus from our own deposits, and liming the ground frees potash. Since the war began, the sources of potash in the United States have been developed greatly.

Lime does several useful things. While the plant does use some of it as food, it is really as a conditioner of the soil that it serves the best purpose. If lime isn't present in a soil, or limestone hasn't been applied, the decaying vegetation causes a sort of soil poison or acid to form. Thus the ground becomes sour and is known as an acid soil. Plants will not grow well on such a soil, and will be the first to suffer in a drought.

Lime will correct an acid soil, for it is an alkali and renders acid harmless. If the soil is heavy and sticks together, it has a tendency to make it loosen up. Another valuable thing that lime does is to render potassium available. It may be in the soil, but not in a form that the fine root hairs can use it. There is a chemical action between this potassium and the lime, and the result

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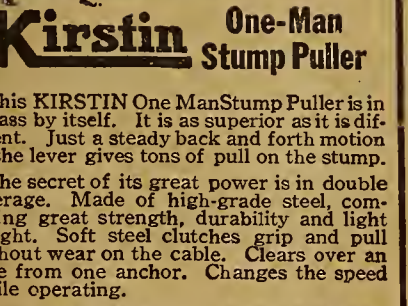

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is that the potassium can be used and the grain will be heavier and better filled or the fruit will be plumper. Another very important action of lime in a field is that it hastens the decay of organic matter, last year's weeds and grasses, manures, and the like.

There are several ways to tell acid soil, one being that legumes don't grow very well in such soil. Sorrels and poverty grass come up in their place, and that is a rather sure indication that lime is needed.

But there is another and better way to make absolutely sure, and that is

A field where fertilizer and lime were applied

known as the litmus test. Litmus is a prepared paper that can be purchased at almost any drug store. It is two colors—the blue and the red. Acid will turn the blue red, so if litmus of both colors are placed in a box and the soil that you wish to test is placed over them, should the blue change to red and the other remain unchanged, your soil is sour and needs lime.

Scarcely any of the legumes will grow in an acid soil, and legumes are a most important crop, for they have the peculiar property of taking nitrogen from the air and putting it into the soil; and nitrogen makes heavy foliage, as has already been pointed out. Alfalfa, the most important legume, uses more lime than any other crop.

There are many places where lime may be procured. The stone may be ground up from quarries in your own neighborhood, if you are favored with such a quarry. It is always best to send a sample to your nearest experiment station and have them analyze it, to see that it is rich enough in lime to make

Part of the same field where plant food was not furnished

its use profitable. The finer the particles after it is ground, the more readily the plant can use it. It may either be burned or used in its ground state.

No definite rule can be laid down as to the quantity that should be used, for that differs with the land. There is, however, one general rule that it will pay to observe, and that is to apply it after the plowing, if it is possible, so that the harrowing and preparations for a seed bed will thoroughly and evenly mix it with the soil. There is always an exception to a good rule, and liming your soil has one that you should observe—never put lime on ground that you are going to plant in potatoes, for it has a tendency to increase scab.

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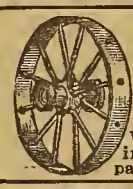

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Win the War by Preparing the Land Sowing the Seed and Producing Bigger Crops

Work in Joint Effort the Soil of the U. S. and Canada—Co-operative Farming in Man Power Necessary to Win the Battle for Liberty

The Food Controllers of United States and Canada are asking for greater food production. Scarcely 100,000,000 bushels of wheat can be sent to the allies overseas before the crop harvest. Upon the efforts of the United States and Canada rest the burden of supply.

Every Available Tillable Acre must Contribute; Every Available Farmer and Farm Hand must Assist.

Western Canada has an enormous acreage to be seeded but man power is short, and an appeal to the United States allies is for more men for seeding operations.

Canada's Wheat Production last Year was 225,000,000 Bushels; the demand from Canada alone, for 1918, is 400,000,000 Bushels.

To secure this she must have assistance. She has the land but needs the men. The Government of the United States wants every man who can effectively help to do farm work this year. It wants the land in the United States developed first of course; but it also wants to help Canada. Whenever we find a man we can spare to Canada's fields after ours are supplied, we want to direct him there. Apply to our Employment Service, and we will tell where you can best serve the combined interests.

Western Canada's help will be required not later than April 5th. Wages to competent help, $50 a month and up, board and lodging.

Those who respond to this appeal will get a warm welcome, good wages, good board, and find comfortable homes. They will get a rate of one cent a mile from Canadian boundary points to destination and return.

For particulars as to routes and places where employment may be had, apply to

U. S. Employment Service, Dept. of Labor

How Much Profit Can You Make With Old Trusty

As "Incubator Man" I am glad to own the title. A good incubator man is destined to stay in business while a poor one will not. We made our first incubators in 1891 and to date have about 750,000 pleased customers from coast to coast. Send for our catalogue and learn why Old Trusty owners have smiles on their faces when the hatches come off.

Like Old Trusty our catalogue is the result of our own experience. We wrote and printed it ourselves. Send for this copy.

Farm and Fireside Readers, Let Me Give You the Answer in Our New Book About Chickens FREE

I don't want to hold out poultry raising as a business with a big, fancy income, but suppose *you* had eggs or chickens to sell at present market price. With the world calling for *increased food production* and with meat and other food prices higher than ever before, who couldn't make profits with a few chickens?

Add Another Income to the Farm

One customer, Mrs. Maude Huffman of Eagletown, Okla., says, "While my husband farms, *I make expenses at home with Old Trusty.* I am not tied at home because of an incubator. I go away for a whole day. Have three children under 3 years of age and there are others in our family. I couldn't do without Old Trusty. I have already made *$300.00* and am not through with Old Trusty yet. I expect to finish the year with *$500.00 net.*" Figuring Mrs. Huffman's investment in Old Trusty, her profits were some hundreds per cent.

Another customer, J. M. Black, of San Antonio, Texas, kept a record of only 25 hens, which gave him 2,040 eggs from November to March last season when the market was 45 cents a dozen. Wouldn't you like to have had the profits?

And still another customer, C. B. Hutchins of Danielson, Conn., reports a net profit of $279.00 after all expenses were paid.

To Make Money You Want an Incubator

You can figure this yourself. Most any hen should lay a dozen eggs every three weeks in the Spring. Suppose eggs were 40c—or even 30c. That's $3.00 to $4.00 that ten hens could bring every three weeks. Multiply this by the number of hens you keep. A fat income in a season's time, don't you think?

Now when you let hens stop laying to do hatching, don't you see how you are *out* just so much money in eggs. You want an incubator to do the hatching and keep the hens *laying eggs.*

Furthermore, you actually get *better hatches,* for Old Trusty *never* deserts the nest, *never* steps on the eggs, *never* dies while setting, never gives mites to the little chicks and never trails them through the wet grass. And Old Trusty will get more chicks from the same hatch than hens can; will start hatching any time you wish and requires less of your time than watching a bunch of clucking biddies hidden away in mangers, hay lofts, straw stacks and what not.

Send for This A B C of Profitable Poultry Raising

Did you ever realize that the farm is the most *profitable* place in the world to raise poultry? Chickens gather up grain that you never could save—they turn losses into profits. One of the most successful breeders of dairy cattle in Minnesota after showing all his prize stock, barn, a silo, creamery, etc., said, "Do you know, from a money making standpoint, those chickens beat almost anything on the farm. We couldn't possibly do as well on the stock without them to turn lost feed and waste into profits. We would be missing a great deal if we didn't have as many of them. Yes, we use incubators—have two of them and start them a-going every year soon after New Year's for early broilers and fall layers."

The World Wants the Produce—You Want the Income

And did it ever occur to you that poultry offers the *quickest* possible meat production? Marketable chickens can be produced in 3 to 4 months, or laying hens in 5 to 6 months. No other form of live stock can compare with this.

You can "do your bit" with Old Trusty if you want to put it that way. At the Convention of the American Poultry Association in Milwaukee last October, it was said that poultry will do *more than anything else* to protect the world against a serious meat shortage. The demand for poultry was never so great, so I am not asking you to take a gamble. There's a demand for farm poultry. Raise more on *your* farm this year.

Over 750,000 Owners

now boost for Old Trusty. That's almost one Old Trusty for every six of the six million farms in the United States. Pretty big number of owners, isn't it? Yet it's not surprising when you know how good Old Trusty is. You see Old Trusty comes from a family of poultry raisers, or I should say was invented by an engineer and poultry raiser. That's why Old Trusty gets *biggest average hatches,* not once in a while, but all the time, and not one year, but *every year.* Some of our oldest machines are still in use. The point is, reader, the Johnsons know poultry raising and know how to build incubators and brooders and how to help their customers to succeed. Ask any of them. Thousands of them are Farm and Fireside readers.

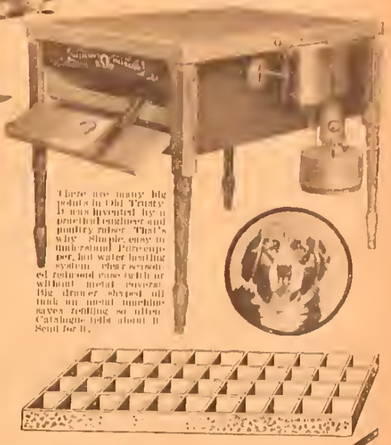
OLD TRUSTY COMES READY FOR BUSINESS

We build Old Trusty *complete* here at the factory (the largest exclusive incubator and brooder factory in the world) and ship it ready for business the minute you take the crate off and screw the legs on. It's already crated and stored in our warehouse (either St. Joseph, Mo., or Clay Center) awaiting your name and address on the tag, so you see we can insure quick shipment. And remember

We Pay the Freight or Express

shipping the quickest and best according to your instructions or the routing of our experts who have had years of experience in shipping Old Trustys.

Mother gave Old Trusty its name after a faithful dog we once had. You could always trust him.



Write Today and Get the OLD TRUSTY BOOK FREE

This book is a real Johnson production and I think it bears acquaintance well if you would judge by the *thousands* and *thousands* of poultry raisers who send for it year after year.

You see we write and print our own books, this being our latest annual catalogue for our 26th year in business.

Like Old Trusty, it's the result of our *own experience* in raising poultry and while I don't crack it up as a "cure-all" for every branch of poultry raising, it covers *more subjects* on making poultry profits than any book I know of. 108 pages, but 100 of them on *profitable poultry raising.*

Send for a copy. It will help you—and we are glad to send it *free. Send today*—use the coupon—or a postal or, what's still better, write a letter and tell me about your poultry.

Yours truly, Johnson, "Incubator Man."

M. M. JOHNSON CO. Clay Center, Nebr.

Thousands of Farm and Fireside readers send for Johnson's Poultry Book every year. Send for your copy today.

Winter Laid Eggs

Huntley, Mont., April 16, 1917.

We think the OLD TRUSTY has no equal and would not want to part with our machine. We have 80 hens that have laid all winter. We have sold $109.50 worth of eggs, besides setting our incubators. One neighbor thinks that hens will lay enough more eggs to make up for not laying in the winter, but we get as many eggs now as he does, after having our hens lay all winter when eggs are the highest price.

Yours,
A. L. HAGERMANN.

Not Cheapest Nor Highest

Bryn Mawr, Pa., Feb. 24, 1917.

I bought a 100-egg OLD TRUSTY incubator in December, 1916. I find that it is not the cheapest nor the highest priced incubator, but it is the best. I have tried several makes, but never had any kind that kept the temperature right on the mark regardless of the weather like the OLD TRUSTY. I run it out in an old shed and the outside temperature is never two days alike. I consider it a great pleasure to run OLD TRUSTY.

Yours,
HARRISON EDSALL.

Mail a Postal if more convenient.

The M. M. Johnson Co. Clay Center, Neb.

Please send me your Old Trusty Book.

Name .....

Address .....

Answer following questions if you care to

How many chickens do you keep?

Do your hens lay in fall and winter?

Do you live in town or on the farm?

Have you had any poultry troubles? .....

Have you used an incubator and have you been successful? .....

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Fireproof—Lasting—Satisfactory

WHY not make your buildings *fire-resisting* as well as storm and weather-proof by using APOLLO Galvanized Roofing and Siding Products, the most economical roofing and siding material for your barn, dairy, wood shed, cattle barn, hog house, implement shed, or garage. Galvanized sheet metal is also the most lasting and desirable material for your silo, water and feed troughs, water tank, cribs, granaries, culverts, and all exposed sheet metal work.

Sheet Metal Silos are strong, durable and satisfactory.

Apollo

Full weight—Galvanized—

Roofing and Siding

—the one *best* material to use for building construction because it is

Fireproof— Impervious to flying sparks. Cannot take fire or communicate fire under any circumstances. Reduces the fire risk—lowers insurance rates.

Weatherproof— Not affected by atmospheric conditions. Does not shrink, warp, curl, or deteriorate. Rain and snowproof. Insures you pure water from cisterns.

Durable— Easy to apply and resistant to rust. Will stand up longer and give better service in all kinds of weather than any other metal roofing made.

These products are economical because of their reasonable cost and long life. APOLLO-KEYSTONE Copper Steel Galvanized Sheets make safe and substantial buildings that insure best service at the minimum of cost. Specially adapted to all classes of farm buildings—strong, rigid, durable. Sold by weight by leading dealers. Accept no substitute. Look for the added Keystone—it indicates that Copper Steel is used. It is your guarantee of satisfaction, service and greatest rust-resistance. Keystone Copper Steel is also unequaled for Roofing Tin Plates. Send for "Better Buildings" booklet—of value to farmers and owners of buildings.

AMERICAN SHEET AND TIN PLATE COMPANY, Frick Building, Pittsburgh, Pa.

Sheet Metal Tanks are rot proof and trouble proof.

Apollo Roofing products enable you to erect safe, economical and neat-appearing implement sheds, outbuildings, etc.

Lasting protection and good shelter is found under Apollo products.

Booklet, "The Home Cow Doctor," free.

Don't Get Caught Like This!

You'll need horse badly from now on. Why take risk or lay up because of lameness? Send for

SAVE-THE-HORSE

THE humane remedy for lame and blemished horses. It's sold with signed Contract-Bond to refund money if it fails to cure SPAVIN, Ringbone, Thoropin and ALL Shoulder, Knee, Ankle, Hoof and Tendon Diseases, and while horse works.

Our 96-page FREE BOOK is the last word in the treatment of 58 kinds of lameness. It's our 22 years' experience. Expert veterinary advice, Sample Contract and BOOK—ALL FREE.

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THE SAFE, EFFECTIVE BLACKLEG VACCINE

WHY TAKE CHANCES

WHEN BLACKLEGOIDS AND A LITTLE LABOR WILL HELP YOU PREVENT LOSS FROM THIS FATAL DISEASE.

NO DOSE TO MEASURE NO LIQUID TO SPILL
NO STRING TO ROT

WRITE FOR FREE BOOKLETS ON BLACKLEG AND HOW TO PREVENT IT

Dept. of Animal Industry PARKE, DAVIS & CO. DETROIT, MICHIGAN

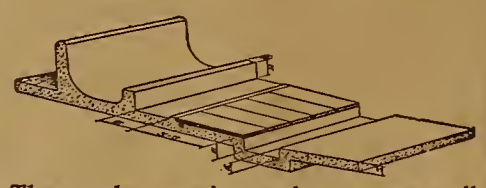
Dairying

Wood Panels Over Concrete

By Walter Hendricks

A SENTIMENT against concrete floors for dairy barns still exists, especially in the Northern States, the objection being that they are cold in winter. The sketch shows the construction of a concrete manger, floor, and gutter. Observe that this is all made in one piece and there is no opportunity for manure to lose its fertility by the seepage of liquids through the floor.

The space where the cows stand is



The wooden panel over the concrete stall makes it more comfortable in winter

surfaced with boards laid lengthwise of the stall, and these are securely fastened with nails or screwed to a 2x4 sunk into the concrete. This plan combines the warmth and dryness of a wood floor with the sanitary benefits and lasting quality of concrete.

Appearances Help to Sell

By Charles E. Richardson

I OFTEN wonder if the average farmer realizes the value of having his products look well when selling them.

When I first became interested in making and selling butter, I used an ordinary butter mold that printed the butter in round one-pound cakes with an oak leaf in the center on the top. Later I had a mold that printed the butter in four one-fourth-pound pieces, each having an individual design; the whole print was oblong. This was a very fancy print, much better than the ordinary farmer had. I did not comprehend how much better it was until one day when I was delivering butter to my regular customers I found that I had a few extra pounds of butter left. So I called at a house and I asked the lady: "Would you like to try a pound of my butter?"

"No, I don't believe that I do," she replied.

"You can see how it looks," I told her, and by that time I had a pound opened to show her.

"My, that does look nice!" she exclaimed. "I guess I'll try a pound."

That was all that I wanted—if I could get anyone to try, then I was satisfied that the quality of the article would make a steady customer. And I noticed several times that after persons saw how neat and nice the butter looked I had no difficulty in getting them to try it.

After thinking it over I decided to improve the print of my butter as much as I could. I had a mold made for me that had 16 individual one-ounce prints—two rows of eight in a row—and on each ounce print was my initial letter. That made a distinctive print and, it being in small ounce pieces, it was easy for the one that used the butter to take an ounce at the table, thereby using more than ordinary, which was to my benefit.

After a time I found that there were times that I had difficulty in handling the butter when merely wrapped in parchment paper with common wrapping paper around the outside. I wondered if there was not a way that I might improve this. I had some boxes made of white pasteboard, just the size of the print of butter. I had stamped on the outside cover my name and address, and "Pure, fresh-made print butter, 1 lb net. Sanitary carton and wrapper."

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MY free book will amaze you. See the big money that is being made by those I taught my famous system of horse breaking and training! Wild colts and vicious, unmanageable horses can be picked up for a song. By my methods you can quickly transform them into gentle, willing workers and re-sell them at a big profit. You can also earn fat fees breaking colts and training horses for others.

Write! My book is free, postage prepaid. No obligation. A postcard brings it. *Write today.*

Prof. JESSE BEERY, 693 Main St., Pleasant Hill, Ohio

$30 Extra Profit Per Cow

every year if you use the Minnetonna Churn. Some farmers make $50 extra. Get the Minnetonna Churn FREE for 30 Days' Trial

Let the Minnetonna prove how it makes, washes, works, salts and moistens butter ready to wrap in 25 minutes or less. Let it prove **big butter profits.** Get our money-saving plan. Also information on how to Earn Your Own Churn. Write on letter or postal "Send me Money Saving Catalog." Sign, address, mail

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ABSORBINE STOPS LAMENESS

from a Bone Spavin, Ring Bone, Splint, Curb, Side Bone, or similar trouble and gets horse going sound. It acts mildly but quickly and good results are lasting. Does not blister or remove the hair and horse can be worked. Page 17 in pamphlet with each bottle tells how. $2.50 a bottle delivered.

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On special jobs shoers use Capewell nails. Why not on yours? A cheap inferior article is a needless expense and trouble to *you*. Why not ask for the world's best nail? All shoers can afford to use the Capewell nail.

$3 Package guaranteed to give satisfaction or money back. $1 Package sufficient for ordinary cases.

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From Factory to Feet

Save Money and Prevent Sickness

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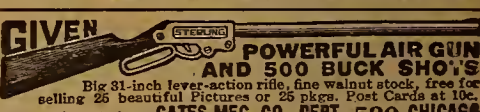

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Acme Pig Meal

Equal to Milk. Protein 28½%

Is a *full* and complete *ration*, nothing else is fed with it. You know how pigs do fed *milk*—that is how pigs do fed Acme Pig Meal, equal to milk. Start when the pigs will eat, it so takes the place of milk they will wean themselves at 8 weeks of age, prevents runts, setbacks, and retains the *baby pig fat*. 15 pounds makes 15 gallons "*milk equal*," enough for one pig 30 days for 65c. A balanced and complete ration until 4 months of age. 25% cheaper than any other. 500 lb. lots $4.45 per cwt., 1000 lb. lots $4.40 per cwt., ton lots $4.35 per cwt. Terms 30 days. Acme Calf Meal same price. Send for Free books on ACME WORM BOUNCER.

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EASY TO USE.
EFFICIENT. ECONOMICAL.

Kills Sheep Ticks, Lice and Mites; Helps Heal Cuts, Scratches, and Common Skin Diseases.

PREVENTS HOG CHOLERA.

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Animal Industry Department of

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The farmer's old reliable treatment for Lump Jaw in cattle.

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Price $2.50 a bottle. Sold under a positive guarantee since 1896—*your money refunded if it fails.* Write for

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A book of 192 pages and 67 illustrations. It is FREE

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A small quantity, applied when calves are young, will prevent growth of horns—no need to dehorn later. A 50c tube—sent postpaid—is enough for 25 calves.

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the World's closest skimming device. Send for free book "FACTS"—tells results of skimming tests and shows how the "IOWA" increases cream checks by stopping your butterfat losses. Before you buy, see and try the "IOWA." Write today.

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Facts

ASSOCIATED MFRS. CO.
351 Mullan Ave., Waterloo, Ia.

Dairying

Bringing Up the Calf

By J. B. Fitch

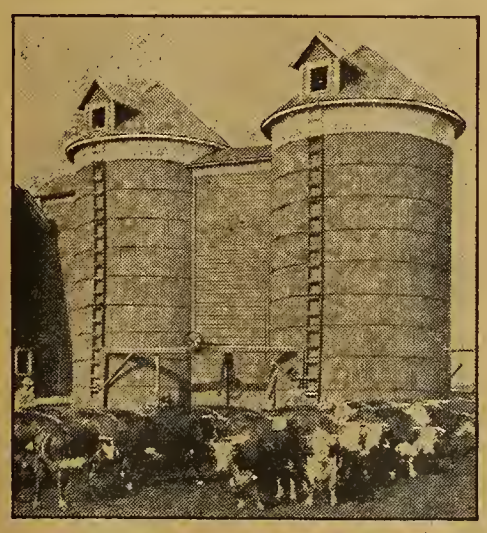
DURING periods when feeds are high in price the tendency is for farmers to limit the amount given to animals. Perhaps in no case is it more unwise to cut down in feeding than in the case of the young calf. The future development and profitableness of the animal depend so much on the first six months of the calf's life that this is well named the critical period of an animal's life.

If a pure-bred bull calf, the size and thrift of the animal will be an indication of his value. If a grade bull calf, unless one has a special market for such, the animal had best be disposed of at an early age. In case of heifer calves, farmers look to these animals to replace the milking herd, and it is important that they be given a good start in life.

An artistic and modern dairy house

The common method of raising calves, and the method which gives very good success, is to allow the calf to run with its dam for the first two or three days. After this the calf can be taken away, and fed its mother's milk for a week. After this time it is not necessary that the calf receive its mother's milk, but it should receive whole milk for the next two weeks. At the end of this time, if the calf is in good condition, it can be changed to skimmed milk.

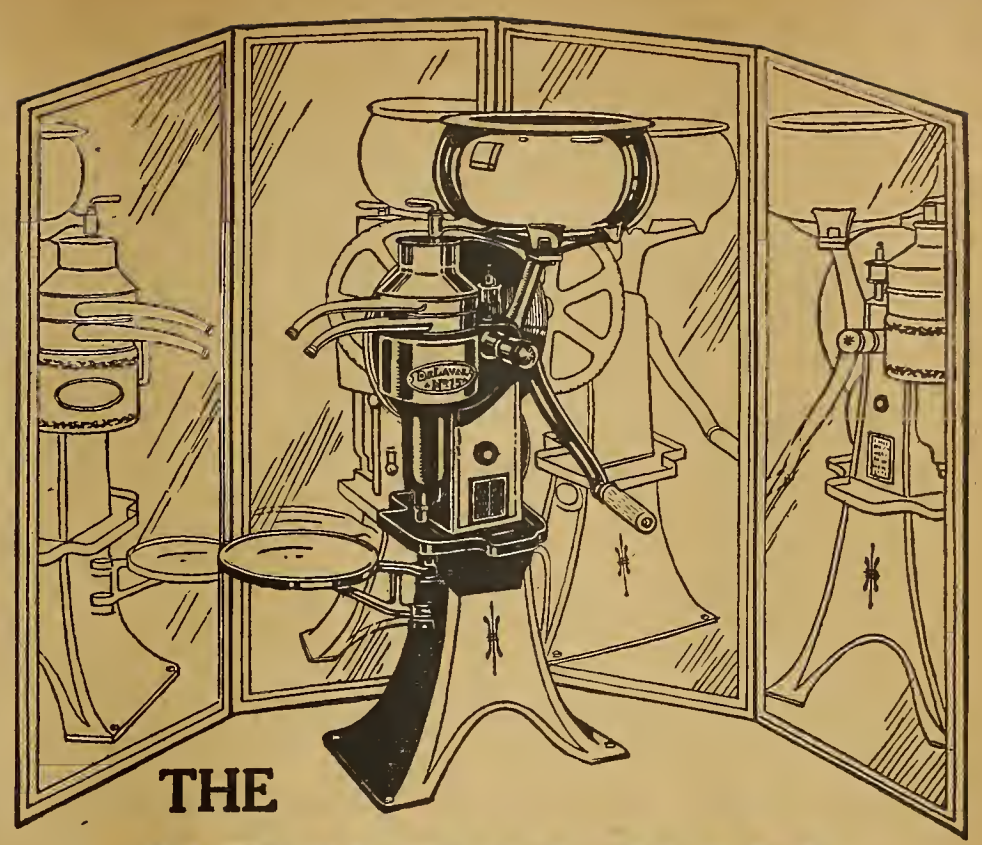
This change should be made by gradually reducing the whole milk and making up the difference with skimmed milk, using four or five days to make the change. The amount of milk the calf will take must be regulated by the size and the appetite of the calf. It is best not to feed the calf too much, rather let him be a little hungry. Generally a small Jersey or Guernsey calf will take two quarts of milk at a feeding, while a Holstein or an Ayrshire will take three quarts at a feeding to start with. This amount can be gradually increased as the calf increases in size, up to the time when it receives 12 to 14 pounds of



Well-bred stock gains rapidly in the feed lot

skimmed milk per day for small calves, and 16 to 20 pounds for larger animals.

At this time, or even before the change is made to skimmed milk, the calf should be given a small amount of bran or a mixture of bran and oats or bran and cracked corn. The calf can easily be taught to eat grain by placing a small amount of the grain in the calf's mouth after it has had its milk. The calf will also begin to eat hay when three to four weeks old. Generally a mixture of legume hay with timothy or prairie hay is better than the legume hay, especially alfalfa, alone.



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VIEWED from every angle, the De Laval is distinctly in a class by itself. It has a business-like appearance. It looks as if it were well made, and it is. It looks sturdy, and it is. There is no make-believe about it anywhere, from the wide-spreading substantial base to the solid, seamless, symmetrical supply can.

It's no wonder that big dairymen and creamerymen who have for years made a careful study of dairy methods and machinery refuse to consider any other separator but the De Laval. They know that from every angle—clean skimming, ease of operation, freedom from repairs, durability—there is no other cream separator that can compare with the De Laval.

They know that it has a record of 40 years of service behind it. They know that it can be depended upon. They know that they can't afford to take chances with any other cream separator—

And neither can you.

Order your De Laval now and let it begin saving cream for you right away. Remember that a De Laval may be bought for cash or on such liberal terms as to save its own cost. See the local De Laval agent, or if you don't know him, write to the nearest De Laval office as below.

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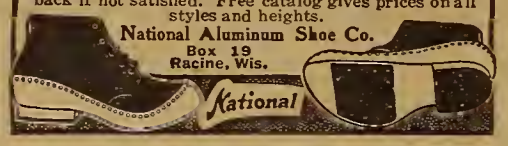

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Cameras, Moving Picture Machines, Silverware, Electric Flashlights, Lace Curtains and many other beautiful and useful articles for selling Post Cards or Art & Religious Pictures. Sell 20 pkgs. of Post Cards or 20 Art & Religious Pictures at 10c each, your choice. When sold send us the $2.00 and select from our Large Premium List the premium given for selling these goods.

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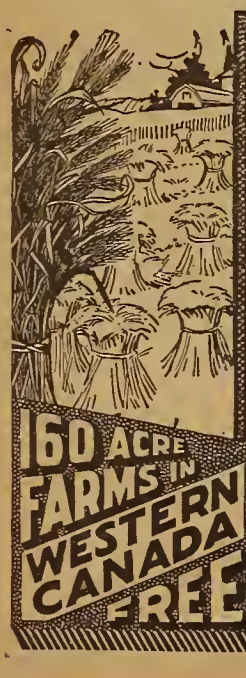
BEGIN BEEKEEPING

It is easy, it is profitable, it is fascinating, and in this war year of 1918 it is a patriotic duty that calls on you to help save some of the more than $100,000,000 worth of honey nectar that goes to waste annually in the United States. Your roof, your back yard, your lawn, your orchard, your garden, your farm, affords the opportunity. Write us today for our booklet on "Beginning in Beekeeping and Beginners' Complete Outfits." We will tell you how to begin right.

THE A. I. ROOT CO., MEDINA, O.
(For 50 years in the beekeeping business.)



Scenes of Prosperity

are common in Western Canada. The thousands of U. S. farmers who have accepted Canada's generous offer to settle on homesteads or buy farm land in her provinces have been well repaid by bountiful crops of wheat and other grains.

Where you can buy **good farm land at $15. to $30. per acre—get $2. a bushel for wheat and raise 20 to 45 bushels to the acre** you are bound to make money—that's what you can do in Western Canada.

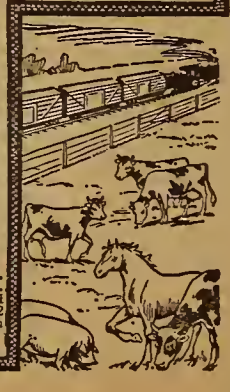
In the provinces of Manitoba, Saskatchewan or Alberta you can get a

Homestead of 160 Acres Free

and other land at very low prices.

During many years Canadian wheat fields have averaged 20 bushels to the acre—many yields as high as 45 bushels to the acre. Wonderful crops also of **Oats, Barley and Flax. Mixed Farming** is as profitable an industry as grain raising. Good schools, churches, markets convenient, climate excellent. Write for literature and particulars as to reduced railway rates to Supt. of Immigration, Ottawa, Can., or to

F. A. Harrison, 210 N. 3rd St., Harrisburg, Pa.; W. S. Nethery, Interurban Bldg., Columbus, O.; George A. Hall, 123 2nd St., Milwaukee, Wis.; O. G. Rutledge, 301 E. Genesee St., Syracuse, N. Y.; C. J. Broughton, 112 W. Adams St., Chicago, Ill.; R. A. Garrett, 311 Jackson St., St. Paul, Minn. Canadian Government Agents.



A record for cheap pumping. A reliable water supply year after year at a cost almost unnoticeable. The Eclipse Wood Windmill's superior construction and powerful frame guarantee long life and satisfactory service. Eclipse mills erected 38 years ago are still pumping today with

No Repair Expense

When you buy a windmill, figure it on its service for years—not on its first cost. Then you'll decide on the Eclipse with its record for many years of cheap, reliable pumping. See an Eclipse at your dealer.

Fairbanks, Morse & Co.
Chicago, Illinois
Manufacturers

A Man Chooses

[CONTINUED FROM PAGE 10]

"I will consider your proposal," she faltered, and in the night's silence faced her problem.

Toward morning she arose, and bent a face, convulsed and tear-wet, over the letter pad on her knee. She wrote:

DEAR BUD: I have not slept any. All night I have been trying to decide what I shall do. This is it, and I want you to forgive me if the decision hurts:

You married me without sufficient thought, Bud. We were both too young. We thought only of our love and longing for each other. But life has so many other problems.

I am setting you free of me—for a time, for all time, just as you choose. I am bound, always. I shall love you always, just as in the beginning.

I have found honest work, and I mean to see you through that college you so wished to enter. I'd sell the chickens, the horses, and the cow—the money will start you. Leave the rest to me. Get ready. I want you to begin as soon as you can. NADINE.

Nadine's trunk was strapped and waiting in the hall. She sat by the fire, wearily listening for Doctor Norris' car, watching the snowflakes hit and slush down the window pane. They seemed to hit and slush into her heart.

Just then the door opened stormily, and she started to her feet to close and bolt it against the wind. But it wasn't the wind—it was Bud, disheveled, fierce, passion-bleached. He reached her at a stride and roughly gathered her into the folds of his wet coat.

"You little fool!" he gasped. "I got your crazy letter, and do you think—do you think for a moment—"

At their door he stopped to insert the key.

"This is a fresh beginning." His voice was like the glance. "Don't say anything to me about the school." He pushed the door wide. "Go in! This is what I want—home, and children, and *you*. I know what I want."

She went in, holding tightly to his hand. Her glance went straight to the far corner and clung there in shocked dismay. Where its creator had hurled it lay the splintered wreck of the Little Red Beech.

Peaches and Profits

[CONTINUED FROM PAGE 12]

no need for any come-back or delay when the trees were being set.

When the trees were hauled to the field for planting, the roots were kept protected from the air until needed. The stems were cut off two feet from the ground and any side branches cut back to a length of three or four inches.

After being placed with roots arranged naturally, good top soil was worked among the roots and carefully trodden down. Much of the remaining filling in and leveling was completed by horse power after a bucket of water had been dashed into the holes.

The trees were then given such cultivation as a carefully tended corn crop receives, and to insure that culture a crop of early potatoes was grown by interplanting the orchard. After the potatoes were harvested in July, a cover crop of rye and vetch was planted.

Sufficient stable manure, nitrate of soda, and acid phosphate were applied to keep the trees growing vigorously.

At the end of the first season's growth the trees were pruned to shape them, and arranged for well-balanced, substantial tops. For this purpose from three to five scaffold branches were left, and all others cut away. Thereafter, until the trees came to fruitage age, the preceding season's growth was cut back nearly one half. After fruiting age arrived, less cutting back and pruning was found necessary.

The protection of Jackson's orchard by spraying began the season it was set. The dormant spray of strong lime-sulphur solution was applied in early spring; self-boiled lime-sulphur for the second spray just after the "husks" fall from his fruiting trees. Combined with this self-boiled solution is three pounds of arsenate-of-lead paste to each barrel of solution. Two later sprayings with the self-boiled lime-sulphur solution followed. Another protective service was hunting and destroying the borers which burrow under the bark at the base of the trees.

How Much Feed Are You Wasting?

NOW, WHEN FEED IS SO HIGH in cost—when the government is urging everyone to conserve food and feeds, *closer attention* must be given to the feeding of farm animals.

EVERY OUNCE of feed must be made to produce the greatest possible return. Every ounce of feed heretofore wasted *must be saved.*

THAT IS WHY we ask, "How much feed are you wasting every day?"

WE WANT TO DRAW your attention to the *importance*—to the *necessity* of making sure you are not wasting feed. We want you to make sure that your stock are in condition to get the fullest benefit from the feed you are giving them and thereby prevent "waste" of feed.

THE MOST COMMON "waste" of feed on American farms today is the feeding of high priced feed to stock which are *infested* with *worms.*

THESE DISEASE-BREEDING, blood-sucking pests impair the animals' digestive system, sap their vitality, stunt their growth, eat your high priced feed and rob you of expected profits.

SAL-VET IS THE LIVE STOCK owners' salvation—the oldest and best known worm destroyer and live stock conditioner on the market. It will *stop* this costly feed waste and increase your profits. It is the safest, surest and cheapest worm destroyer and conditioner you can get.

FOR THE SMALL SUM of 2½c per month for each hog and sheep and a trifle more for horses and cattle, you can *make sure* that your stock are free from worms—that you are not wasting feed and at the same time make them thrive better and fatten quicker on *no more feed.*

Here is an Actual Demonstration

THESE TWO PIGS are from the same litter. They were fed the same feed, cared for the same way, excepting the larger one was fed SAL-VET to free it of worms; to keep its digestion healthy and enable it to get the fullest benefit from its feed.

THE OTHER WAS FED as the majority of farmers feed their stock. Nothing but the usual feed—nothing to get rid of the worms and insure a healthy digestion. The difference is plainly evident. Here is a plain case of "wasting" feed *and losing profits.*

DON'T MAKE THE MISTAKE of thinking your stock are free from worms. Few animals escape them. You will be surprised at the difference in the growth and thrift when SAL-VET is fed regularly. Feed it to all your stock—horses, cattle, sheep and hogs.

YOU WILL SEE a wonderful change in them. You will then realize as thousands of America's best known feeders have—that SAL-VET is the live stock owners' best profit-maker and feed saver—the cheapest, safest and most profitable live stock remedy you can use.

THE FEIL MFG. CO.

Gentlemen:—We have used "Sal-Vet" for several years, and are well pleased with results. At the Iowa State Fair at Des Moines, we showed 12 pigs, under one year of age, which we sold for $1320.00; for two of these, we received $500.00. The pigs shown in the accompanying photo are from the same litter. The larger one received "Sal-Vet" regularly from birth, and weighed 560 pounds; the smaller one was not given "Sal-Vet" and weighed 270 pounds. These pigs are registered Durocs.

S. W. STEWART & SON, Kennard, Neb.

GET A SUPPLY of SAL-VET from your dealer—feed it according to directions and you will never be without it again. If he cannot supply you, write us.

The Feil Mfg. Co.

Dept. 42 Cleveland, Ohio

Sal-Vet Poultry Tonic Makes Hens Lay Better.
Sal-Vet Roup Tablets are Efficient and Dependable.
Sal-Vet Lice Powder Gets Rid of Lice Instantly.
The Best Poultry Remedies You Can Buy.
For Sale at Dealers.

RAISE HARES FOR US

Belgian Hares, New Zealands and Flemish Giants. **Profits Large.** We supply stock and pay you $2 to $10 each. Also other Fur Animals. Contract and 2 Instruction Books for 10c. None free. OUTDOOR ENTERPRISE CO., Box 5 Holmes Park, Missouri.

Live Stock

Hogs and Profits

By John Wood

NO ANIMAL kept on your farm will return you a profit as surely and as quickly for the feed consumed and the care given as the brood sow. A hog will produce a pound of increase for every four to five pounds of feed consumed, while fattening cattle will require ten to thirteen pounds to produce the same amount of increase.

Hogs are not only more prolific than any other kind of live stock, but are also essential to the economic utilization of waste products on the beef, dairy, grain, fruit, and vegetable farms.

The sow that carries good length and depth of body generally proves the most prolific. The sows should be selected from good-sized litters, and should carry a strong back, wide loins, full hams, large heart girth—which indicates constitution,—plenty of bone, and should stand well on good, strong legs.

If the runty pigs are put by themselves, they generally do better

While quality should not be overlooked, in the search for it you should not sacrifice substance, nor select delicate animals. A uniform bunch of sows will produce a more uniform lot of pigs, and a uniform lot of pigs will feed better, look better when fat, and sell for a higher price on the market.

The sow should be fed and managed so as to enable her to farrow pigs and to nurse them to a point where they can be fed. The sow needs the right kind of feed for three important reasons: For the maintenance of her own body, for the growth of her own body, and for the development of the fetal pigs.

A good, steady sow, with well-developed teats, can usually be depended upon to raise a litter of good, growthy pigs. If, after being properly handled, she fails to farrow a good litter of pigs, she has no business on your farm, and should be fattened and sold for pork.

The Beef Herd

By A. B. Jackson

IF YOU have a herd of good breeding cows you will have a good dividend payer in the future. To assemble a good herd of breeding cows is by no means a small task. There are two very important things to consider—type and uniformity of type—when building up a herd of breeding cows.

If you can get your herd recognized as producing cattle of a certain desirable type and then turn out only that type, you will be able to secure better prices on the average than if you have a few of many kinds to offer.

It is by no means necessary that your cattle be the best in the world to make you famous. You will do well if you succeed in creating a reputation for always having in your herd thick-fleshed cattle with size, substance, and quality.

The best practice in building up a herd is to purchase a few cows or heifers from an old-established breeder of good reputation, whose herd has been noted for years as having produced animals of the best type and quality. It is much better to invest money in a few first-class cows than in double the number of inferior ones at about the same cost.

EXPOSURES Such as This---

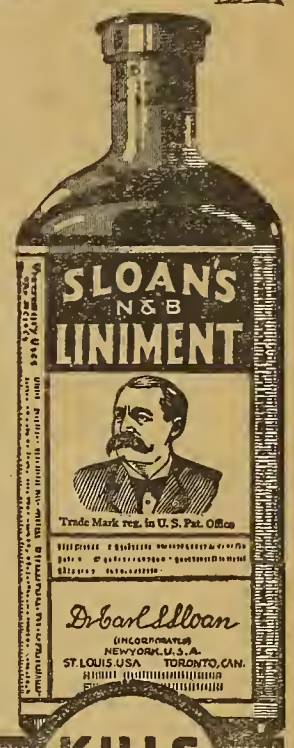
with their resultant aches, pains, rheumatic twinges, stiff muscles—are neutralized by a prompt application of Sloan's Liniment.

The country is dependent on the farm folks. Every day's delay is dangerous. Sloan's Liniment keeps you fit as a fiddle for the daily duties of farming.

Applied *without rubbing*, it *penetrates* to the ache, pain, soreness, bringing quick relief.

Good for live stock, too. Keeps them in good shape and increases their value. Corrects lameness, soreness and bruises. Kills Pain.

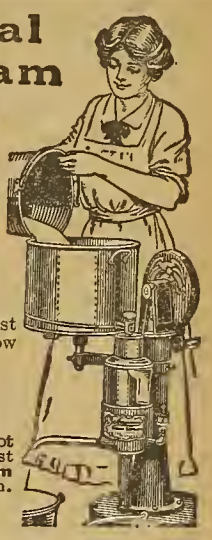
The large size bottle means strict economy—six times as much as the small size. Get *yours* today.



Sloan's The World's Liniment KILLS PAIN

$17.95 Upward Sent on Trial

American Cream SEPARATOR



Thousands in Use giving splendid satisfaction justifies investigating our wonderful offer: **a brand new, well made,** easy running, easily cleaned, perfect skimming separator **only $17.95.** Skims **warm or cold milk closely.** Makes thick or thin cream. Different from picture, which illustrates our low priced, large capacity machines. Bowl is a **sanitary marvel** and embodies all our latest improvements. **Our Absolute Guarantee Protects You.** Besides wonderfully low prices and generous trial terms, our offer includes our—

Easy Monthly Payment Plan

Whether dairy is large or small, or if you have *separator* of any make *to exchange*, do not fail to get our great offer. Our richly illustrated catalog, *sent free* on request, is a most complete, elaborate and interesting book on cream separators. **Western orders filled from Western points:** Write today for catalog and *see* our big money saving proposition.

American Separator Co., Box 1058, Bainbridge, N. Y.

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Don't Let Your Horses "Stall"

Sore necked horses are bound to "stall"—they can't do full work. Give them collars that fit and they won't have collar sores.

Here is one collar that you can adjust to fit any horse perfectly, whether fat or thin.

Fitzall Adjustable Collars

You can also change it from one horse to another and it always fits snug and smooth. There are four perfect-fitting sizes in each collar.

The Fitzall is a standard, high-grade collar with patented, adjustable feature, which saves you time, trouble and money, but costs nothing extra.

Ask for Fitzall collars and insist on getting them. You won't have to buy so many collars at a time nor buy collars so often.

If your dealer can't supply you, we will.

Write today for book containing full description, valuable information, prices, etc.

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Manufacturers and Distributors

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Makers of the famous "Master Brand" Harness—America's Best.

GROW THIS BEAN
1200 TO 1

This **Bean** is a Gigantic Wonder—over 200 pods have been grown on a single plant—all well filled, producing over **1200 Beans** from **1 Bean** planted. Plants grow strong and erect, branching out in all directions, bearing their pods up well from the ground, which literally load the plants; **Beans** being pure white and of the best quality.

Plant in your garden or any good soil, only **1 Bean** in a hill, and they will mature a crop in about 80 days, ripening very evenly, and the growth and yield will simply surprise you. Just the **Bean** everyone should plant this year for it will make the greatest yield from a little space—of all **Beans.**

One customer sold over $8.00 worth of these pure white Beans from a few planted in a corner of his lot.

My supply is yet limited and I can offer only in **sealed packets** containing **50 Beans** each with cultural directions. Order early to be sure of them.

Sealed packets 10c each; 3 pkts 25c; 7 pkts 50c; 15 pkts $1.00 postpaid

My 1918 Seed Book is filled with High Grade Garden Seeds at lowest prices. Do not buy until you see my **Book;** it will save you money. Tell your friends; it's mailed free. Over 30 years in the business.

F. B. MILLS, Seed Grower Dept. 20 ROSE HILL, N. Y.

GOOD SEEDS

GOOD AS CAN BE GROWN
Prices Below All Others

I will give a lot of new sorts free with every order I fill. Buy and test. Return if not O. K.—money refunded.

Big Catalog FREE

Over 700 illustrations of vegetables and flowers. Send yours and your neighbors' addresses.

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Delicious Apple

True Delicious, trees 15c each. 1 year from graft or bud. Large fruit, beautiful dark red, quality unsurpassed. Sweet, slightly tinched with acid. Comes out of storage in April in perfect condition.

Campbell's Early Grape—new variety, vigorous, very hardy, very early and an abundant bearer. Concord Grape, 2 yr. old, No. 1, $5.60 per 100. 1 yr. No. 1, $4 per 100. Garden seeds. Catalog free.

SONDEREGGER NURSERIES AND SEED HOUSE
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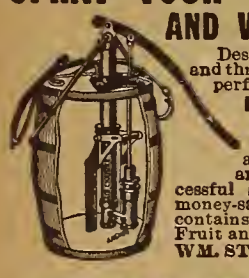
Trees and Seeds that Grow

SPRAY YOUR FRUIT TREES AND VINES



Destroy the fungi and worms, and thus be sure of large yields of perfect fruit.

Excelsior Spraying Outfits and Prepared Mixtures

are used in large orchards and highly endorsed by successful growers. Write for our money-saving catalog, which also contains a full treatise on spraying Fruit and Vegetable crops.

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GRASS SEED
FREE SAMPLES

Wonderful Value Wholesale Prices Profits Divided

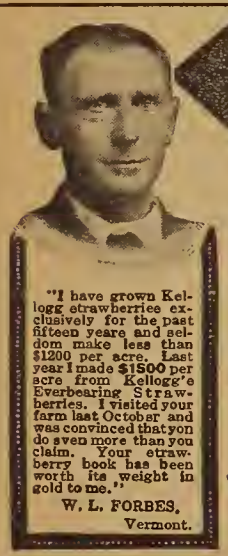
with customers. Don't fail to investigate these bargains. Recleaned Tested Timothy $3.25 bu., Clover $14 to $16, Alfalfa $8.90, Alsike Clover and Timothy, $5.50. Sweet Clover and other Grass and Field Seeds at proportionately low prices.

All sold subject to State or Government Test under an absolute **money-back guarantee.** We are specialists in grass and field seeds. Located so as to save you money and give quick service. Send today for our big profit-sharing, money-saving Seed Guide which explains all, free. Buy now and save money. Write

American Mutual Seed Co., Dept. 642 Chicago, Illinois

FIELD SEEDS AT WHOLESALE PRICES

We save you money on your Seed Bill. Write for our Special Money-Saving Price List and get our reduced prices on Best Quality Guaranteed Seed. You should know about our low prices. Write at once and be convinced. Everything Guaranteed equal to Samples or Money Refunded. Don't pay double profits on Grass Seed. Our seeds are sold subject to Government test. Have low prices on Seed Corn, Oats, Wheat, Speltz, Barley, Cane, Millet, Cowpeas, Rape, Vetch, Sudan Grass, Potatoes, Artichokes and all Farm and Garden Seeds. Don't order until you write for big 116-p. catalog. Free samples and special low prices on seeds you require. Free 60-p. book on Growing Alfalfa to those who ask for it. Write now. **A. A. Berry Seed Co., Box 242, Clarinda, Iowa.**



"I have grown Kellogg strawberries exclusively for the past fifteen years and seldom make less than $1200 per acre. Last year I made **$1500** per acre from Kellogg's Everbearing Strawberries. I visited your farm last October and was convinced that you do even more than you claim. Your strawberry book has been worth its weight in gold to me."

W. L. FORBES, Vermont.

This Man Made $1500 Per Acre from Strawberries

Grown the "KELLOGG WAY"

Growers everywhere are making big profits from Kellogg Strawberries. E. D. Andrews of Michigan paid for a cozy **$4000** home from two acres of Kellogg Strawberries. J. A. Johansen of Nebraska made **$670** from only three-fourths of an acre.

Kellogg's big red strawberries are the biggest, sweetest and most delicious strawberries grown. You can grow them right in your garden or back yard.

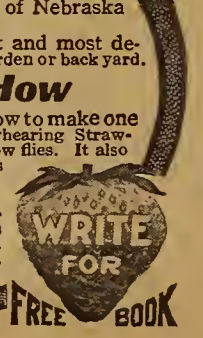
Our FREE BOOK Tells How

Get this book and make $500 to $1200 per acre. It tells how to make one acre do the work of two and all about Kellogg's wonderful Everbearing Strawberries which are loaded with big, red berries from June until snow flies. It also explains the big cash prizes we offer boys and girls, and contains

30 Strawberry Recipes

for the women folks. Tells them how to prepare all kinds of strawberry dainties. Also gives complete information about Kellogg's wonderful strawberry gardens. Write today for this book. It's FREE and postpaid. A postal brings it by return mail.

R. M. KELLOGG CO.
Box 470 Three Rivers, Mich.



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Garden and Orchard

A Kentucky Home Garden

By P. M. Sergent

I KNOW I can speak for all members of the Sergent family when I say that we believe in an acre garden with an overflow of soup beans, pole beans, strawberries, celery, squash, etc., outside the acre area of our garden proper.

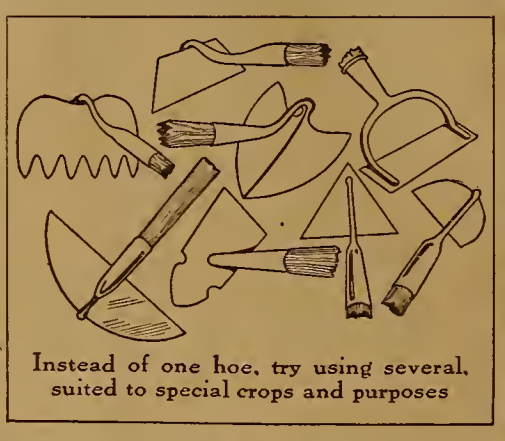
But the size of a garden is not so important. The main thing is to have a well-planted, carefully kept, productive garden. Each household must decide whether it shall be the large horse-power variety or the intensive hand-power, wheel-hoe type.

Our garden is 16 rods long and 10 rods wide, with movable panel fencing at the ends to facilitate plowing, soil preparation, and culture by horse power. The greater portion of the seeding, hand-cultivation, and harvesting of the products are done by myself, and I find the open-air work enjoyable and invigorating even if hard and at times tiresome.

Our garden plot was selected where the land has good drainage and a warm, early soil, with a subsoil that holds moisture well. Each fall the garden is very heavily dressed with rich stable manure, and is plowed as late as possible. In the spring it is replowed, and worked down to a perfect seed bed.

Here in Kentucky we can plant onion sets in a strip along one side of our garden in November, which hastens their development materially over those planted in early spring. Our onions are among the most profitable of the garden crops we raise.

Our early cabbage is reset from the hotbeds as early as it is safe, and the plants are placed between each second



Instead of one hoe, try using several, suited to special crops and purposes

row of onions, with a tablespoonful of acid phosphate under each cabbage plant, which doubles our cabbage crop. The onions are pulled by July 1st, and cabbage is given the full use of the ground, and receives cultivation every week until heading begins. It is not unusual for the cabbage grown on the space from which onions were taken as a first crop to produce 5,000 pounds or more.

Here we can plant our peas and earliest potatoes soon after February 1st, but our hotbeds are depended on to start all tender stuff like tomatoes, peppers, sweet potatoes, etc., and by making use of paper pots made of building paper we also can have a nice supply of early beans, sugar corn, squash, cucumbers, etc., ready to transplant as soon as frost danger is over.

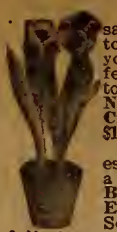
But it should be kept in mind that the real secret of having the most satisfactory and profitable garden during the entire season and a generous supply of things to can and store for winter is to continue making a succession of plantings and keep the soil occupied, fertilized, and cultivated the entire season.

Spray to Win the War

IN OUR ambition to grow bumper war-winning crops we must not forget that protecting plants, fruits, and crops from destructive insects and diseases means even more this year than will planting areas too large to be safeguarded from plant enemies.

If an acre of cabbage, potatoes, squash, beans, or small fruits is planted and half of these are destroyed by insects or plant diseases for lack of needed protection, we will be wasting costly seed, fertilizer, and labor. Our aim must be to gauge our crops to our ability to care for them.

Potted Winter Blooming Bulbs



We guarantee them to reach you safely, even in coldest of weather and to blossom satisfactorily this winter in your home. Potted in rich earth and fertilizer. They are rooted and ready to make instant growth. Your choice of **Narcissus, Hyacinths, Tulips** and **Crocus,** 2 pots for 25 cts, 10 pots for $1.00 **Postpaid.**

Our Nurseries and Seed Farms were established here in Northern Iowa over a half century ago and our "**Blizzard Belt**" strains of Fruits, Ornamentals, **Everbearing Strawberries,** Garden Seeds, etc., are being grown successfully in every state in the Union. Catalogue of our various "**Blizzard Belt**" products and a copy of our paper **Gardner's Garden Experience, Free.**

The Gardner Nursery Co., Box 30, Osage, Iowa

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For 69 years the leading authority on Vegetable, Flower and Farm Seeds, Plants and Bulbs. Better than ever. *Send for free copy today.*

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EVERGREENS

38 Hardy Tested Varieties

Best for windbreaks, hedges and lawn planting. Protect buildings, crops, stock, gardens and orchards. Hill's Evergreens are Nursery grown and hardy everywhere. **From $1 to $10 per hundred.** Hill's Evergreen book and 50 Great Bargain sheet sent free. Write today. World's largest growers. Est. 1855.

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Guaranteed Genuine Everlasting Grimm Alfalfa

Most economical and profitable to sow as it produces plants which do not winterkill like other varieties; larger yield, higher feeding value. Booklet, "*How I Discovered The Grimm Alfalfa*", with testimonials and seed sample free.

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FREE BIG CATALOG OF LIVE **SEEDS**

and Plants and Pkt. Giant Pansy Sent **FREE.** Best New Seeds sure to grow, at low prices. Gardeners ask for Wholesale List.

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CLOVER and TIMOTHY $5.50 BU.

Greatest Grass Seed Value Known—Investigate. Alsike Clover and Timothy mixed—the finest grass grown for hay and pasture. Cheapest seeding you can make, grows everywhere. You will save **1-3** on your grass seed bill by writing for free sample, circular and big Co-operative Seed Guide, offering Field Seeds, all kinds. Write today.

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Baldwin's Big Berry Plant Farms produce healthy, northern grown, standard varieties and everbearing Strawberries, Raspberries, Blackberries, Currants and Grape Plants. Grown on new ground. Read about our money back guarantee in Fruit Book. All plants true to name. Properly packed to reach you in good growing condition. Write for our Fruit Plant Book today.

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FOR two successive years, James I. Sherman has earned more than $1,500 during the winter months. He is on his way to reach this amount again this winter, and unless something unusual occurs will greatly exceed it. He calls on people whose subscription to FARM AND FIRESIDE is about to expire and renewe it. He also presents our striking offer to new readers. What he has done, you can do. If you can devote all or part of your time to our work, write us. We will give you the same proposition we offered him.

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Strawberry PLANTS **FREE** To introduce our Pedigreed Everbearing strawberries we will send 25 fine plants free. **CONSOLIDATED NURSERY CO., ST. LOUIS, MO.**

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Send 10c to pay packing, postage, etc. and we will mail these 10 packets selected seeds with full instructions, in a 20c premium envelope which gives you more than the seed **FREE**

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You Need This Book

in making up your garden planting list. Conditions are abnormal in the seed business this year. The demand is far out-running the supply. The temptation to lower quality is tremendous. Protect yourself. Buy of a seed firm that has maintained a high standard of quality for 62 years.

The descriptions and illustrations in our 1918 Catalog are true-to-life. It is a safe guide in selecting varieties either for home or market.

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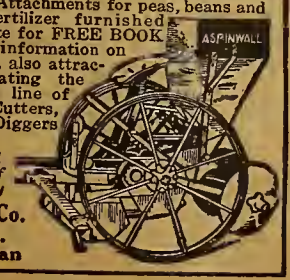
Attachments for peas, beans and fertilizer furnished when desired. Write for FREE BOOK containing valuable information on this important crop, also attractive folder illustrating the Aspinwall complete line of potato machinery—Cutters, Planters, Sprayers, Diggers and Sorters.



World's Oldest and Largest Makers of Potato Machinery

Aspinwall Mfg. Co.
610 Sabin St.
Jackson, Michigan

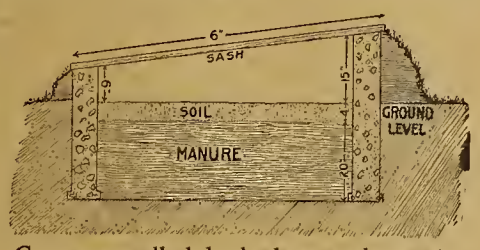
Garden and Orchard

Hotbed to Last Generation

By H. F. Grinstead

MY EXPERIENCE has been that a generous amount of hotbed space is a profitable gardening equipment. It is then possible to have the young growing stuff started earlier, and transplanted when necessary to better advance it to earlier maturity when finally set in the open ground.

In addition to several sashes used for temporary hotbeds and cold-frames, I find it a real convenience to have some permanent hotbeds walled with concrete. In climates where the ground freezes deeply, concrete-walled pits can be dug and concreted easier before winter



Concrete-walled hotbeds are always in repair, and indicate thrift

weather arrives. Nevertheless, the work can be done with a little more effort any time when there is no danger of the concrete freezing before it sets.

I favor making the pits here in Missouri 2½ feet deep, the north concrete wall 3½ feet high, and the south wall 3 feet high. The inside edges of front, back, and side walls are finished with a suitable groove to receive the sashes to make a tight, wind-proof joint. If the right material is properly used, I find 4-inch concrete walls are sufficient.

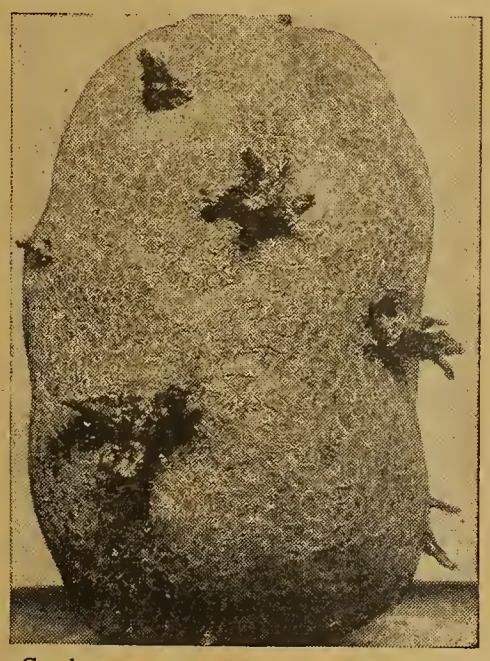
Provision for good drainage of subsoil water and ditches to carry off surface water should not be overlooked, and where the hotbeds are to be started for early use, double sashes and mats or other frost-resisting covers are a necessity.

I find such permanent hotbeds are just the thing in which to grow lettuce and other hardy garden luxuries for winter use by sowing the seed in the fall. Also, the pits provide admirable storage for celery, roots of various knids, and even apples for winter use.

There is less breakage of glass and more speedy handling when the sashes are made with extensions for handles.

Speeding Up the Spuds

A CALIFORNIA potato grower claims to get potatoes ready for market twenty days earlier from seed pieces cut from the seed end of tubers than from the stem end. It is now quite generally known that placing the seed potatoes in direct sunlight for two or three weeks

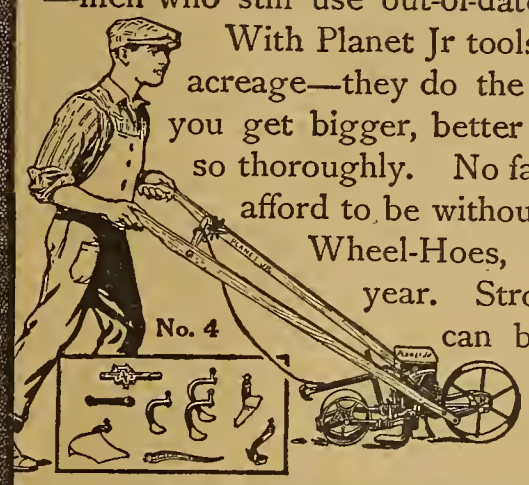


Stocky sprouts developed in sunlight hasten maturity of the crop two weeks

early in the spring before they are planted will hasten the maturity or the ripening of potatoes at least two weeks. For small potato-growing operations enough seed can be placed in the kitchen windows to supply sufficient seed for a small garden patch.

Planet Jrs. do the work of 3 to 6 men

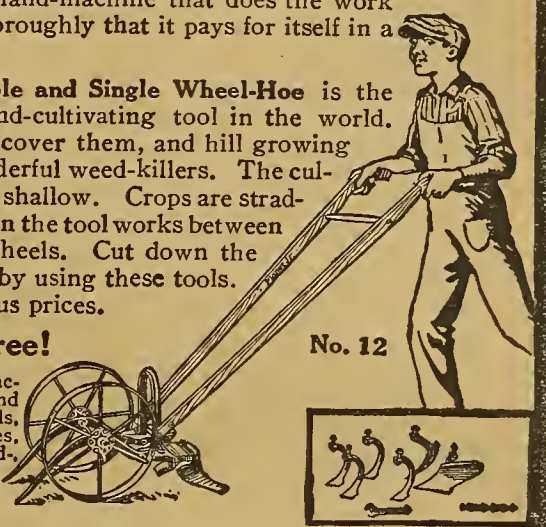
—men who still use out-of-date tools and methods. With Planet Jr tools you can double your acreage—they do the work so quickly; and you get bigger, better crops—they cultivate so thoroughly. No farmer or gardener can afford to be without Planet Jr Seeders, Wheel-Hoes, or Cultivators this year. Strong, yet so light they can be used by a woman or boy. They last a lifetime. Fully guaranteed.



No. 4 Planet Jr Combined Hill and Drill Seeder, Wheel-Hoe, Cultivator and Plow sows all garden seeds (in drills or hills), plows, opens furrows and covers them, hoes and cultivates all through the season. A hand-machine that does the work so easily, quickly and thoroughly that it pays for itself in a single season.

Planet Jr.

No. 12 Planet Jr Double and Single Wheel-Hoe is the greatest combination hand-cultivating tool in the world. The plows open furrows, cover them, and hill growing crops. The hoes are wonderful weed-killers. The cultivator teeth work deep or shallow. Crops are straddled till 20 inches high; then the tool works between rows with one or two wheels. Cut down the cost of raising your crops by using these tools. We make 24 styles—various prices.



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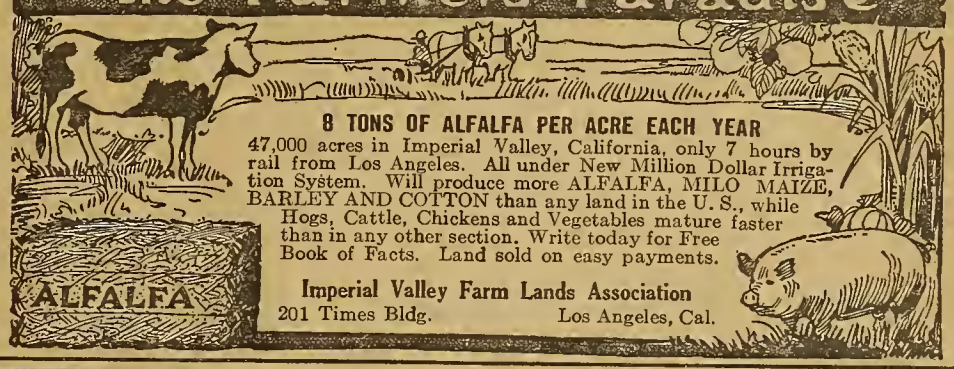

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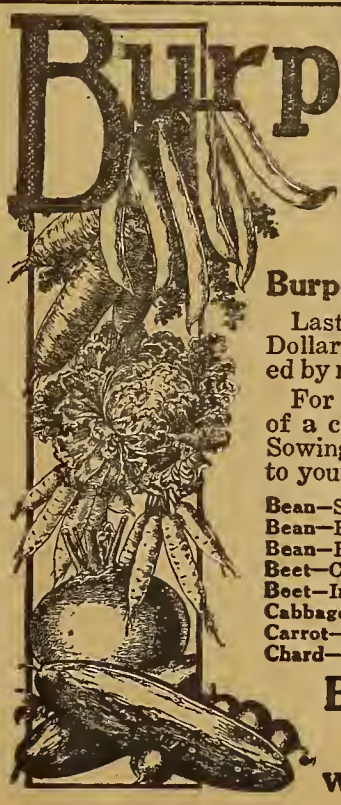
Burpee's Seeds Grow



Food will win the war Produce it!

Burpee's Dollar Box of Vegetable Seeds

Last year we offered for the first time Burpee's Dollar Box of Vegetable Seeds. The sales exceeded by many thousands our fondest expectations.

For 1918 it has been improved by the addition of a complete garden plan and leaflet on Seed Sowing. It contains the following seeds, mailed to your address for **$1.00.**

Bean—Stringless Green Pod	**Lettuce—Iceberg**
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Beet—Improved Blood	**Radish—Scarlet Turnip**
Cabbage—Allhead Early	**Salsify—Sandwich Island**
Carrot—Chantenay	**Tomato—Chalk's Jewel**
Chard—Large Ribbed White	**Turnip-Purple Top Strap-Leaf**

Burpee's Annual for 1918

The Leading American Seed Catalog is mailed free upon request

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Get Those "Extra" Chicks With

Old Trusty

With valuable eggs and big profits at stake you need Old Trusty more than ever this year. Don't overlook the fact that Old Trusty is built at the hub of the poultry world. Was invented by a practical engineer and poultry raiser, and now has 750,000 satisfied owners from coast to coast.

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and tell you about the special plans I have for 1918 Old Trusty owners. I want you to make a BIG income this year. Raise more poultry—you want the profits, the public wants the produce. I believe we have the key to your success this year. Write and let me tell you about it. H. H. Johnson, *"Incubator Man."*

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Why take chances with untried machines when for only $12.50 we guarantee to deliver safely, all freight charges paid (East of the Rockies) BOTH this iron covered Incnbator and roomy Brooder, fully equipped, set np ready for use. Yon take no risk in bnying an Ironclad ontfit. We give yon

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We will ship yon the machines — let yon nse them 30 days — and if yon don't find them satisfactory, send them hack—we'll pay the freight charges and refnnd your money. We give a

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Don't class this hig galvanized iron covered, deoendahle hatcher with cheaply constructed machines. Ironclads are not covered with cheap, thin metal and painted like some do to cover np poor qnality of material. Ironclads are shipped in the natural color—yon can see exactly what you are getting. Don't huy any incnhator nntil yon know what it is made of. Note these Ironclad specifications: Genuine California Redwood, triple walls, asbestos lining, galvanized iron covering. Large egg tray, extra deep chick nursery, hot water top heat, COPPER tanks and boiler, self-regulator, Tycos Thermometer, glass in door, and many other special advantages fully explained in free catalog. Write for it TODAY or order direct from this advertisement.

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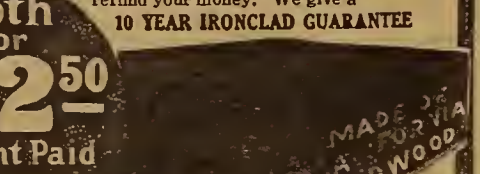

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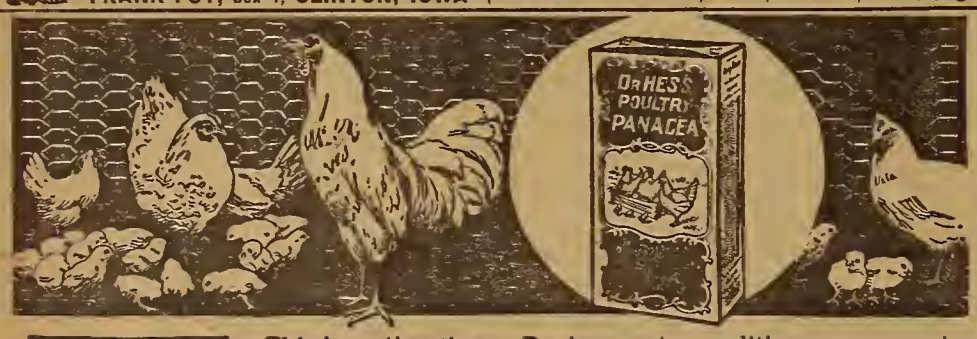
CRESCENT POULTRY FARM, Box 31, Des Moines, Ia.



How to get Chicks that will Live

This is mating time. Begin now to condition your parent stock with Dr. Hess Poultry Pan-a-ce-a. You can't expect strong, livable chicks from weak breeders. Pan-a-ce-a is an excellent conditioner. It will make your hens and roosters healthy—give them the strength and vigor they need, and it's sure to tell on the chicks. Try it and see how much better chicks you'll get later on. Pan-a-ce-a is **GUARANTEED.** The dealer will refund your money if it does not do as claimed. 28,000 dealers are selling it. Packages, 25c, 60c and $1.25. 25-lb. pail, $2.50; 100-lb. drum, $9.00. Except in the far West and Canada.

Dr. HESS & CLARK, Ashland, Ohio

DR. HESS POULTRY PAN-A-CE-A

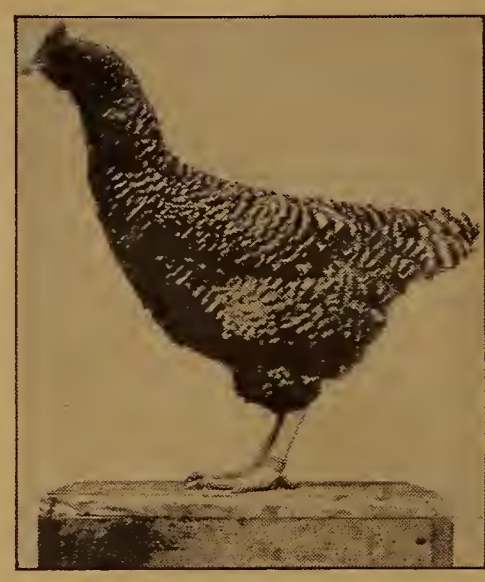
Poultry

Champion Rock Layer

By Frank W. Orr

THE battle of the breeds in the field of egg production is a lively one these days. There are nearly a dozen official laying contests now in operation in this country, and as many more experimental tests being conducted every year by poultry officials of our state experiment stations. When these exact records of laying first began, the general opinion held was that the small Mediterranean breeds—Leghorns, Minorcas, Hamburgs, etc.—were the only heavy layers, and the Plymouth Rocks, Rhode Island Reds, Wyandottes, Orpingtons, etc., were the general-purpose breeds which would lay some eggs—perhaps only half as many as the Mediterranean class.

But how much we have learned in a few years of exact official testing! The fact has now become clear that heavy laying is not a quality of any breed as a breed, but that this quality is a matter of inheritance coupled with great vigor. Continued correct breeding for eggs develops the heavy-laying strain whether



Hen 414-M holds highest official Rock record in America—298 eggs in pullet year

the race of birds thus bred are Rocks, Reds, Wyandottes, Orpingtons, Leghorns, or other breeds.

The strain of Barred Rocks from which hen 414-M, here pictured, descended has been continuously and scientifically developed for heavy egg production during a period of ten years, actively directed by Dr. Raymond Pearl. The value of Dr. Pearl's scientific work in poultry biology at the Maine Experiment Station is now fully recognized.

This remarkable hen, 414-M, was hatched May 12, 1914. She laid her first egg November 4th, when 176 days old. Between November 4, 1914, and October 29, 1915, she laid 298 eggs. At the end of her great record she weighed 6.7 pounds. This hen is no sport, but came from very high-laying ancestors. The record of her dam was 210 eggs in a year. The average production of two of her granddams was 212. The average production of her four great-granddams was 194 eggs in a year.

Embden geese can be pastured like cattle, and confined with hog fencing

This hen laid 161 eggs in her second laying year, making her record 459 eggs for the first two years of her life. Dr. Pearl has bred a considerable number of Barred Rocks that have laid above the 400-egg mark in two years.

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At our special $3.98 price we will sell 8000 Smyth's all steel body 70 egg incubators. Guaranteed to hatch as large a per cent of strong, healthy chicks as any incubator made, regardless of name, make or price. Made with all steel body, triple walls, 1918 improved disc regulator, standard thermometer visible through glass damper, best safety metal lamp, heat distributing drum around outer edges, water jacketed heat flue and automatic heat regulator insuring even temperature and moisture in every part of egg chamber, and even heat to eggs all the time. Equipped with special egg tray sloped so small end of egg points down and chicks when hatched will drop from shell into the roomy nursery below. Full directions with incubator. SEND $1.00 deposit and we will send you this high-grade, latest improved Smyth's all steel body 70 egg by express, subject to examination. Pay balance $2.98 and express charges to agent after you find the incubator perfectly satisfactory and the greatest incubator bargain in the world, then take it home and TRY IT 30 DAYS and if you do not find it as good a hatcher as you ever saw or heard of, regardless of price or make, or if for any reason you are dissatisfied, return at our expense and we will refund your $3.98 and freight charges. If you want incubator sent by PARCEL POST send $3.98 and enough money extra to pay the parcel post postage and we'll send on same liberal trial offer as above. Shipping weight 19 lbs. We make very low prices on larger incubators, brooders and poultry supplies of all kinds in our big free incubator price list sent you free upon request. Order incubator or price list today

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Poultry Book Latest and best yet; 144 pages, 215 beautiful pictures; hatching, rearing, feeding and disease information. Describes busy Poultry Farm handling 53 pure-bred varieties. Tells how to choose fowls, eggs, incubators, sprouters. This book worth dollars mailed for 10 cents.
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Hampton's BLACK LEGHORNS, Day-Old Chicks and Eggs. Get my free circular before you order chicks. Tells why the BLACK LEGHORN is the greatest layer and most profitable breed on earth. Write today. Also White Leghorn Chicks **A. E. HAMPTON, Box O, Pittstown, N. J.**

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MANKATO INCUBATOR CO.
Box 722 Mankato, Minn.

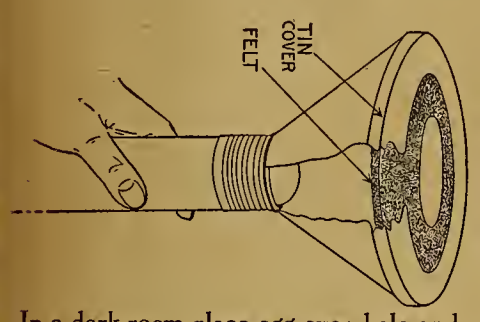
Poultry

Candling by Flashlight

By B. F. W. Thorpe

THE handy little pocket flashlight, although a comparatively new convenience, has helped many a one out of a disagreeable or dangerous situation. There now seems to be one more helpful use for it that is sure to be appreciated by poultrymen. This is testing the condition of eggs by using the flashlight for the candling process.

One plan in use for candling by flashlight is to cut off enough of the spout end of a tin funnel of the right size to fit snugly over the lens of the flashlight. Next, make use of a tin can or bucket cover of right size to fit tightly over the mouth of the funnel. Cut out a round hole in the tin funnel cover so as to leave a rim of one-half inch to one inch around the edge, and the job is done except to cut a hole one inch in diameter in a piece of felt or heavy black cloth



In a dark room place egg over hole and press button

for placing over the funnel top to be held in place by the tin cover.

The candling is done by placing the egg over the hole in the felt in a dark room while the operator looks down vertically on the egg, meanwhile "pressing the button."

This device can be used successfully for testing hen-brooded eggs right by the nests by using a blanket or cloth to exclude light.

Gas Heat for Incubators

By J. T. Raymond

THE aggregate area of country that has access to natural gas is now considerable, and gas is becoming favorably known as a very satisfactory incubator and stove-brooder fuel. In fact, artificial gas, even at double the cost of natural gas, is favored by some operators of big poultry plants. Here is the opinion of A. B. Colby, a New Hampshire poultryman:

"Next to electricity, which is prohibitive, gas is the most expensive incubator fuel I could use, but I intend to continue with it. The labor involved is considerably less than with oil or coal. There is less fire danger. Temperature has to be regulated as with other fuels, but the heat is far more even. When eggs worth $300 are in the trays, accidents are serious things, and I believe there is a minimum possibility of accident with gas. Gas gave perfect service in my hatchery last spring.

"I hatched 5,000 to 7,000 chicks a month. My gas bill averaged $55 a month, so that the fuel cost figured out a trifle less than one cent a chick. The rate I pay is $1.10 a thousand. In some sections, of course, considerably lower rates are obtained."

The incubators used by Mr. Colby are 360- and 540-egg capacity, and number twenty-one. Farm gas plants are increasingly numerous. When the poultry keeper owns one of these, or when he is in gas-company territory, he ought to investigate the merits of gas heat for incubators. In the Eastern States its popularity is spreading.

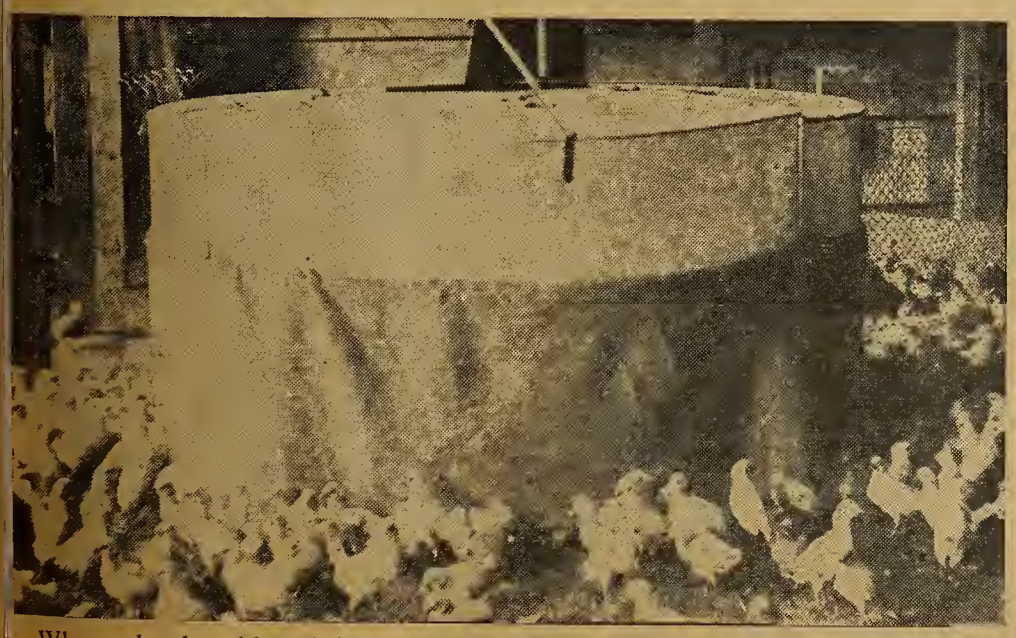
Good Yards Save Losses

By M. Roberts Conover

NEAR many farm buildings where poultry range unchecked the newly seeded grain fields show bare spaces of an acre or more which have been scratched up and eaten off by the farm flock. The average acre thus eaten frequently means a lessening of the crop by from 20 to 40 bushels, while the feeding value to the flock secured from this acre would not amount to more than that furnished by one or two bushels of grain. This is an expensive and unnecessary plan of feeding. To remedy this I aim to have every chicken house or set of chicken houses provided with a chicken-proof yard so that at critical times during the year all of the chickens may be confined.

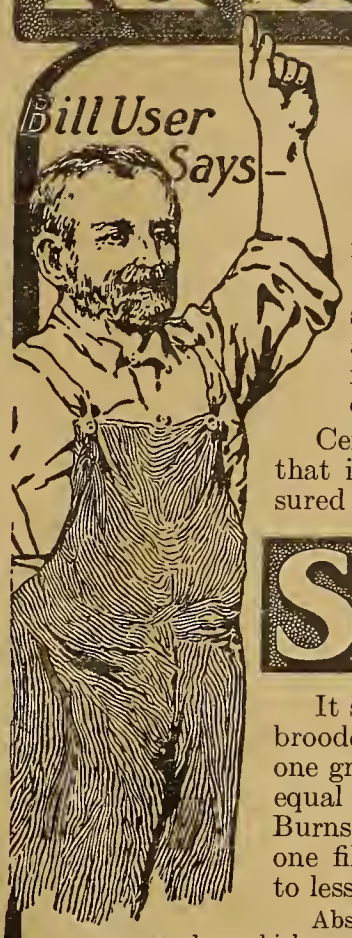
We make these poultry fences of woven wire, using strong fence posts which we set substantially in the ground. A six-inch fencing board is placed around the bottom of the fence and one on the top just above the wire. This makes a good brace for the posts. Above this top board is stretched a strand of barbed wire. This makes a fence six feet high. If an occasional venturesome biddy scales this fence, we clip a few feathers from one wing.

In addition to the advantage mentioned there are several other reasons why it is important to have a place to confine farm flocks. In the spring of the year especially, there are a number of days that it is an advantage to keep a flock confined in order to keep the egg machinery steadily working. On stormy days we open up the doors and let the birds out into the yard to sample the storm for themselves. They soon decide it is better to stay in and go back, and are contented. But give them free range and they'll be huddled up in groups in various places about the farmyard, quite miserable, and perhaps roost out all night. Then down goes the egg yield. On such days we go into the poultry houses occasionally with a little variety—potato or apple peelings, a bunch of clover or alfalfa hay, silage, etc. These things, of course, in addition to their regular ration when running at large. If not possible to have a yard with a tree or two, we plant a few plums or damsons and it's surprising how soon they make some outdoor shade, and it is not long until there is fruit for ourselves, and chickens too.



Why not hatch and brood the season's chicks all together, as one job, to economize time and labor?

RAISE EVERY CHICK



More chickens this year than ever before. More for your table, more for market.

That's the demand. You need them to replace high-priced meats. The country needs them for the same purpose.

The opportunity to make money and save money with poultry was never so great as now. But you must make every chick from your high-priced eggs grow, and every ounce of your high-priced feed produce meat.

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It is so good that it has many imitations. But our patents will be protected. Make sure you get the Standard. We are so certain that it is the best brooder ever built, so sure it will satisfy, that we let you

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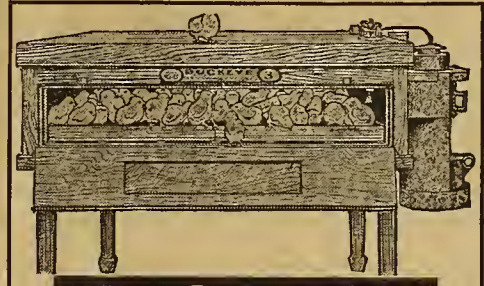

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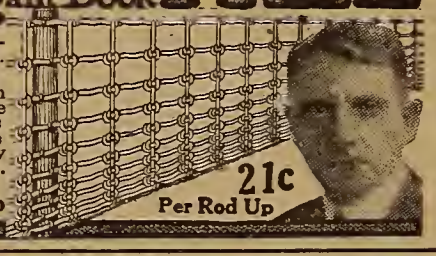

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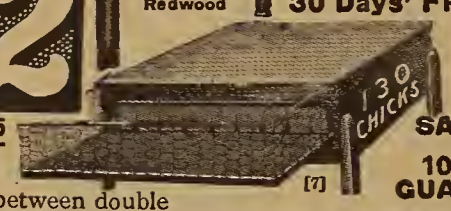

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Poultry

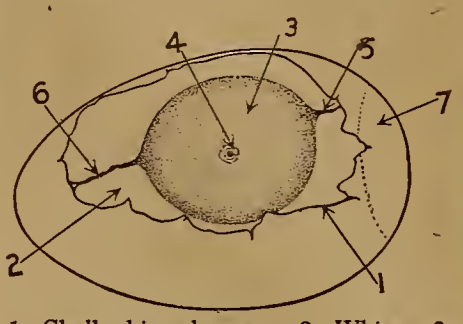
How to Know an Egg Germ

By A. B. Dunn

WE NOW hear a lot about the sale of sterile eggs at a nice advance in price over fertile eggs to special customers. Not long since an ultra-fastidious housewife who makes a practice of buying sterile eggs said to me:

"You know, after using infertile eggs, I dislike to go back to those which show the germ."

But what is the germ like? The popular notion seems to be that it is the white ropy substance found at each end of the yolk. This really is a cord of albumen, somewhat denser than the rest of the white, the function of which is to hold the yolk suspended in the white. On one side it extends to the pointed end of the egg, on the other to the air-bubble at the large end of the egg. If you will place an egg on its side and carefully chip off the shell on what is then the top, you may see how this cord is attached. When the egg is removed from the shell, this rope of albumen contracts so that it looks like a thick white clot at each side of the yolk.



1. Shell chipped away. 2. White. 3. Yolk. 4. Germinal sac. 5 and 6. Albuminous cord. 7. Air chamber

These clots sometimes slip beneath the yolk as the egg is transferred from shell to bowl, and remain unnoticed, thus giving rise to the supposition that they are not found in all eggs and are therefore germs. These clots are more evident in some eggs than in others because of the varying density of albumen. Close observation will reveal this cord in all eggs.

Others have the mistaken idea that the spot on the side of the yolk is the germ. This, too, will be found on the yolks of all eggs. It is the germinal vesicle, and is merely the spot where the germ of the fertile egg is attached to the yolk. The yolk is weighted in such a manner that, whatever the position of the egg, it turns so the germinal vesicle if always on top.

Yolk Hangs in Hammock

Nature has thus provided for the germ to receive the direct benefit of the heat of the brooding hen during the entire period of incubation. The albuminous cord, by which the yolk is attached to either end of the egg, swings back and forth, allowing the yolk to turn, but always keeping it suspended in the center of the white. It also acts as a spring which prevents the germ in the fertile egg from sustaining injury through the shock of rough handling. The action of this cord and the germinal vesicle may be observed if an egg is opened as directed above.

The germ itself is microscopic until incubation causes the embryo to develop, so it is never visible in an egg that has not started to germinate. When perfectly fresh, it is impossible to distinguish between the fertile and infertile egg, either in flavor or appearance.

Infertile eggs, of course, keep better than fertile ones, and for this reason many progressive egg producers are putting on the market only sterile eggs. So when consumers are buying eggs advertised as infertile, they have no right to question the honesty of the producer when certain spots are found in the eggs. On the other hand, if you are producing eggs for hatching, do not estimate the fertility of your eggs by the spots in those you break for the table.

The absolute test of fertility in an egg is incubation for from five to seven days. Then the vigorous germ will speak for itself by starting to develop its rudimentary circulatory system.

Farmer Makes $1,782.91 From Poultry

Mrs. George Russell, a Missouri farmer's wife, writes: "Last year I kept 365 Brown Leghorns the 'Quisenberry Way.' My cash sales were $1,782.91." George Hatch, Calif., says: "Following your teachings I turned $275 worth of feed into $667 worth of eggs." For a small cost we furnish our Practical Poultry Correspondence Course to farmers and poultry raisers, let them use it one year. If they do not increase their profits 50% and are not satisfied, it does not cost them one cent. Thousands succeeding with our methods. Write today for bulletin on "How to Cut the Cost of Feeding," and 72 page free book "Dollars and Sense in the Poultry Business." Send 10c to cover mailing costs. No obligation on your part. Write

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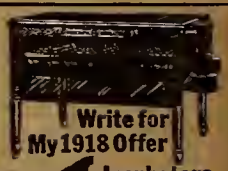

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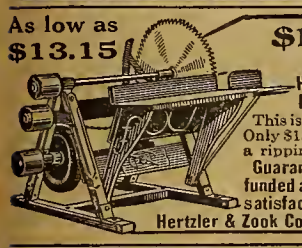

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Good-Health Talks

Suggested by Questions from Our Readers

By DAVID E. SPAHR, M. D.

EXPERIENCE and investigation have proved beyond the shadow of a doubt that defective teeth impair the general health and greatly impede school progress. Tuberculosis, disorders of the digestive tract, and various other diseases are frequently preceded by diseased conditions in the mouth. There is a direct relationship between dental development and mental development, and it is absolutely essential to good school work that children's teeth be maintained in a healthy condition. Everyone should possess a good tooth brush, and be taught to use it regularly. Small particles of food which lodge between the teeth make the bacteria grow rapidly and create an acid that causes the teeth to decay.

A cavity in a tooth affords a breeding place for germs. The gums and teeth become infected and sore, preventing the proper mastication of the food. This interferes with digestion, causing gastric and intestinal disturbances.

Moral: Keep your teeth and mouth clean.

So I Can Reply Promptly

WHEN you write to me about your ailments, or those of your relatives or friends, please write on only one side of the paper, and make your descriptions of symptoms as brief as you can. If you wish a personal reply, kindly enclose a stamped envelope. DR. SPAHR.

Food Value of Oysters

Please tell me if oysters have any food value? *Mrs. T. F., Illinois.*

IN REGARD to the food value of oysters, I am informed by an expert in nutrition that they come nearer to milk in the way of value in the diet than any other food. They contain all the food substances—protein, carbohydrates, fat, and salts—in fact, they are ahead of milk in respect to proportion of protein.

Foot Powder

What can I do for my sore and tender feet? They pain so much when I walk. *A. N. T., Arizona.*

USE the following powder: Talc, nine ounces; boric acid, one ounce. Mix and shake into the shoes and dust on the stockings after they have been drawn on the feet. This is said to give great relief.

Bites Finger Nails

My little daughter bites her finger nails. She doesn't seem to be at all nervous. How can I break her of this habit? *Mrs. D. S. K., New York.*

I PRESUME you will be compelled to depend upon moral suasion. Formerly mothers painted over the nails with a solution of bitter aloes, or required the child to wear gloves.

So Turpentine Won't Blister

Turpentine, when applied, usually blisters. Is there anything I can mix it with? *T. E. O., Missouri.*

Yes; use one third the quantity of lard.

Diphtheria Carriers

THE diphtheria bacillus almost always enters the body through the mouth and nose, and the pathological lesions are usually localized in the mucous membrane of the throat, nose, larynx, or upper respiratory tract.

The bacillus may be transmitted by direct contact with the acutely ill person kissing, or by the patient coughing or sneezing; by indirect contact with articles recently infected by an acutely ill person, and by contact both direct and indirect with the bacillus carrier.

The "carrier" question in disease is now receiving much attention and study, and it is gratifying to know that many of the mysterious sources from which epidemics spring up suddenly and unexpectedly will be brought to light.

Carriers may originate in two ways, according to the latest scientific authorities—either because the carrier receives an infection and does not develop the disease on account of a previously acquired immunity, or because he does not rid himself of the organisms after an attack of the disease. Persons with large tonsils and deep crypts, with adenoids or hypertrophic rhinitis, are extremely liable to become diphtheria carriers.

Persons afflicted as above, who have had or have been exposed to the disease, are now being subjected to a rigid examination. If found to harbor the bacillus they must submit to having their tonsils and adenoids removed, and to other treatment to destroy all obnoxious germs.

Baldness

Is baldness hereditary? What causes it? *E. W. C., Ohio.*

SOME people are born with a predisposition to baldness, and suffer from a secondary non-parasitic alopecia. But baldness is usually due to nutritional changes, due to senility, except when caused by disease.

Eye Wash

Is alum good for an eye wash? *T. R. E., Montana.*

ALUM, being an astringent, has been used in a weak solution of three grains to an ounce of water for catarrhal conditions of the eyes, but has been practically abandoned for other more efficient and scientific remedies such as boracic acid.

Fruit Juices

Tell me a simple remedy to prevent sore throat and diphtheria. *Miss C. K., Tennessee.*

THE juice of lemons and pineapples diluted have been found most effectual in destroying diphtheria bacilli and as a gargle in sore throat. Use it frequently as a preventive.

Loss of Voice

Several times during the year I lose my voice. There seems to be no soreness of the larynx, and no pain on pressure. My general health is very good. These attacks are usually sudden; sometimes they continue for only a few hours, while at other times they last for two weeks. *H. F. S., California.*

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Erysipelas

What causes erysipelas? Can you tell me something of the serum treatment for this disease? *F. F. W., Kentucky.*

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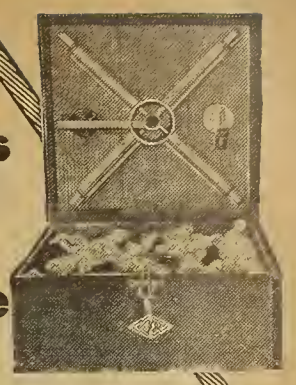

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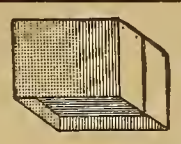

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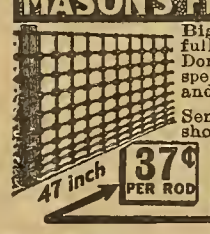

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Good Taste in Draperies

Making Doors and Windows Beautiful by Using the Right Hangings

By JANE MACPHERSON

The valance of cretonne gives unity to this group of three windows

WHEN you plan to redecorate your house this spring, remember that a change in the color and materials used for the hangings at the doors and windows, without further alterations in the room, will give an entirely different effect. Inexpensive materials, when used properly, are just as effective as the heavier and more expensive ones.

The size and shape of a door or window, as well as the room in which it is found, are the first things to be considered in selecting new materials. The purposes of doors and windows—to admit light and air—must not be destroyed by their decorations. For this reason, thin and transparent materials are most frequently used as a background, and heavier materials as draperies at the side.

Large double windows or group effects should be treated as a whole, and it is often possible to treat a group of high windows in this manner. Extra long windows require more thought in their draping than those of average length, but are often more effective. Shades at a window are a necessity, and should be uniform throughout a house. It is best to have the inside of the shade white or light cream.

Draping a Window Group

THE most attractive shade is made of net lace, casement cloth, or pongee silk. The material is cut the width of the windows, and usually edged with a narrow braid. Then it is attached to rollers and placed over a single white shade. In this case curtains are not used at the windows, the shades and draperies at the top and sides being sufficient. Sometimes one of these fancy shades and the ordinary commercial shade are attached to the same roller.

The curtains in a living-room may be of scrim, casement cloth, net, net lace, silk, cretonne, or chintz; the hangings of cretonne, chintz, linen, denim, silk, velvet, velour, and stencil cotton or crash, according to the size of the room, and the type and upholstery of the furniture. Tapestries, velours, and other heavy upholstery call for the use of heavy materials in the hangings. The colors in the hangings should at all times harmonize, if not match, with the general color scheme adopted for the room.

Curtain materials for the bedrooms should be dainty, easily laundered, and thin enough so that they will not exclude light and air. For this reason net, scrim, dotted swiss, barred muslin, and linen are preferable. Cretonne, chintz, Japanese toweling, dyed cotton, linen, and pongee silk give a gay note to the decorative scheme of the room. For a child's room printed calico can often be found which will make attractive and easily laundered hangings.

Small high windows, which are so often found in the newer houses, are most effectively trimmed with a scrim or net curtain fastened on a rod short enough to permit the window to open. These rods are sometimes placed at both the top and bottom of the curtain to keep it in place.

The drapery for these windows, if they appear in a group of two or three, should be made in the form of a valance reaching the entire width of the window, and narrow enough so that it does not interfere with the opening and closing of the window. The valance is attached to the top of the window casement, and hangs down to the opening.

Large double windows or a large window with a small one on either side should be treated in the same manner as a group of small high windows in the matter of draperies. The curtain material will depend upon the room in which it is to be used, and should be hung in the same manner as for two or three single windows. The single drapery at the top gives it an effect of a whole. If side draperies are to be used, they should be hung on the outer side of the outside windows of the group, making two side draperies at a group of windows.

Windows above window seats should be hung with the same material as all other windows in the room. If outer hangings are to be used, it is often effective to hang them inside of the window seat, making a small alcove. If this is not desired they may be treated like other window groups.

Windows which reach to the baseboard are best hung with side draperies which reach just below the sill. If in the same room there are windows which do not reach to the baseboard, the draperies may be permitted to do so, giving the window the long effect. This, of course, would not be done in case of very small high windows. Such windows will rarely be found in the older houses.

These small high windows are simply draped

The decoration of the doors is equally important as the windows. Often the entire decorative effect in a room is ruined when the doors are left untrimmed. Double doors between rooms, French doors, long-glass and short-glass front doors, all have their special requirements in decoration.

The ordinary front door with a small glass in it is always curtained with a thin material, such as scrim, net, or net lace, to admit light, as this is often the only means of obtaining light in a hall. The curtains should be fastened both top and bottom with a very small rod, and may be in a single piece or in two pieces which are pushed apart in the center.

Long doors which are constructed entirely of glass panels offer infinite possibilities for decoration. They may be trimmed with a single shade made of pongee silk, casement cloth, or net lace. Net lace on which has been appliquéd the flower or bird design cut from chintz is exceptionally effective, and such a shade may be made at home at small cost. If shades are used, no other draperies are necessary.

Light Materials for Portières

IF SHADES are not used, the doors may have draperies at the sides made of the same material as the hangings which predominate in that part of the house. If wide enough, the doors may permit an inside drapery of the same material as the other curtains. All of the draperies at the doors, except the shades which are on rollers, are run on rods both top and bottom.

Single doors at closets and between rooms where a portière is considered necessary require lighter material, such as linen, cretonne, or chintz, and occasionally denim, because such draperies need frequent laundering or cleaning. Velvet, velour, and other heavy portières, which were once so much used, are now known to be dust collectors, and are not very practical, especially in bedrooms. The same thing is true of draperies for double doors.

Double doors are usually found between the dining-room and living-rooms and halls, and must have more formal treatment than those in bedrooms. It is better to use the lighter materials here also, but if velvets are to be used they should be thrown across a pole at the top of the door and not permitted to hang to the floor.

When the short drapery is used at a double door, it is hung full and permitted to reach entirely across the space. If valances of a distinct design have been used in the room, this same pattern and material may be carried out in the drapery for the double door. In this event the once unsightly opening becomes an added attraction for the room.

Coarse Russian linen, used for kitchen towels, is constantly overlooked in buying curtains. Its decorative possibilities are endless. The gray in which it is made is a suitable color for bedrooms when a quiet groundwork is needed for stencil treatment or darning. This material is only 15 inches wide, but the joining of the widths lends itself to decorative needlework, and a hinged effect in stitching gives it individuality.

Japanese toweling, which is very effective for bedroom curtains, can be had in attractive colors and designs. The material is usually about 12 to 15 inches wide and is exceptionally reasonable in price.

Expensive lace curtains in large design always seem out of harmony. Light, gauzy effects at the windows to soften the light, and yet sufficiently transparent not to exclude the view, are better. They can be bought with simple edging or an insertion of torchon lace in soft, creamy tones, and seem suitable for all occasions. Bobbinet also makes a pleasing curtain. The large, open mesh does not keep out the light.

It should be the purpose to get away from the commonplace. It is not practicable or possible for many to make their own furniture or weave their rugs, but it is possible for every home to express the individuality of the owner in the choice of beautiful and original hangings.

The door, draped in cretonne and net, is one of the chief attractions in this room

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In the Spy Net

By Emel Parker

PART III

FOR hours she sat beside the window, praying that he would return. She was shocked at the sudden realization of how little she knew of him. Despite the days he had spent in her house, she knew nothing of his affairs, not even of his occupation. She had drifted into a comfortable, unsuspicious acceptance of him, and now in her long vigil she began to pay the penalty. Of the full extent of that penalty she had no realization then.

At last she decided that she must go to bed. "I shall go to sleep at once," she resolved, "and in the morning he will tell me, no doubt, where he went to-night, and I will laugh at my fears."

But just as she did not go to sleep at once, neither did he tell her in the morning of his nocturnal disappearance.

At luncheon he appeared—paler than since the first day when he had come to the house, and the worried lines around his mouth and eyes showed startlingly.

He made no apology for his non-appearance at breakfast, except to say that he thought he needed the sleep. The meal was a silent one, and Eugenia could scarcely believe that he had ever uttered words of love to her.

That evening she again took up her post by the window. The moon was partially obscured behind a cloud, so she strained her eyes, praying, however, that her vigil might be in vain.

A faint crackling of leaves attracted her attention. She discerned the crouching figure of a man stealing into the night, and she knew that it was Carl.

Waiting only a moment to make her departure safe, she slipped down the stairs, unlatched one of the long French windows in the library, and crept out on the veranda. Aided by the darkness, she made her way through the great live-oak trees and toward the path which led to the sea.

She knew from the rustling of leaves in front of her that this was the path he had taken. She was grateful for her early training which now made it possible for her to walk noiselessly along the narrow trail and gauge his position. He was walking rapidly, but she was able to keep up with him, always maintaining the same discreet distance between them.

For almost half an hour she hurried along, until he was almost at the edge of the woods. She began to run, her rubber soles making no sound, and her knowledge of the woods enabling her to avoid the outhanging branches and vines.

The moon came from behind the clouds just before the man reached the clearing. Suddenly, although he was at some distance, she saw him quite plainly.

She hid behind the outermost trees and watched him with breathless intensity as he ran quickly down the sandy strip of beach toward the sea. A thick fog, accompanying the incoming tide, obscured the water from her view.

When he reached the edge of the fog he disappeared.

She knew then that a boat had been waiting for him.

Exhausted and heartsick, she slowly retraced her steps to the Big House.

As she closed the door her knees were trembling with excitement and fatigue. It was with difficulty that she undressed and crawled into bed, for her hands shook so that the mere process of unfastening her garments was painful.

Her anguish had its real source in her mental state, however. Again her heart and her common sense came into conflict.

"How shameful to spy upon him!" said the former.

"How shameful for him to act in such a way as to make it necessary!" retorted common sense.

"Oh, I know that there must be *some* excuse, some explanation for his strange behavior!" cried her heart.

"Then what is it? What could it be? Does anyone engaged in an innocent pursuit act in this way? Think of the suspicious things he has done—telling you, after much hesitation, that his name is Carl Stackpoole, while in his bag were numerous belongings marked R. K. M. . . . No, don't say that he might have borrowed these things, for he could easily have told you that; but instead he deliberately told Sam that he had no hair brushes, while there were two in this bag marked with those initials. Why does he avoid all mention of his profession or his family or his home?—even the simplest questions Aunt Sarah asks him he evades. Then, to sneak out of the house at night when he thinks everyone is safely in bed! Heaven knows how many nights he has gone that you don't know about! And to-night you yourself saw him go—obviously in a boat. That proves another thing, perhaps more serious than anything else—whatever he is doing he is not acting alone. At least one other person shares his secret, but that person is not you."

Hour after hour the girl lay awake, wide-eyed, unable to form any plan, unable to think beyond her present moments of agony.

Kneeling on the sand, she read the note. "Gibberish!" she said. Then suddenly she knew. "It's a code message."

WHEN Liza called her the next morning she said with truthfulness that her head ached and that she wanted no breakfast. Having been awakened, however, she found it impossible to go back to sleep, and as she pictured her guest sitting down-stairs alone in the dining-room she half wished that she had decided to go down.

So deeply had the roots of her affection for him gone down into her heart, hitherto untouched by any man, that it was impossible to tear them up all at once.

"This is an unforgivable thing!" said common sense. For already Eugenia's mind was on a trail.

Shortly after nine the girl rose and went directly to her aunt's room.

"Dear me, Eugenia!" said that lady. "You look as pale as a ghost. Speaking of ghosts, I've just been reading such a terrible and yet thrilling account of the Stepham. You know the Sunday edition of the Savannah papers came yesterday, but I didn't have time to do more than glance over them, because you and Mr. Stackpoole came up last night—not, of course, that I wasn't glad to see you. I do think he is such a courteous young man; for all the world like poor Charlie Daingerfield. But as I was saying, I looked over the papers this morning while I was waiting for Liza to come up, and I read such an interesting letter which an Atlanta boy—Simmons, I think his name was—wrote to his family. He had enlisted in the navy, and was one of the crew of the Stepham."

Eugenia waited with breathless interest.

"What did he say?" she asked.

"He said that the Stepham had been tried out, and on her first trip had proved to be an excellent boat—the best type of destroyer we have, as a matter of fact. That was the reason, you see, that no one could learn anything of her a short time ago. Do you remember, I saw something in the papers about her, and I was afraid that she had been sunk, and I had all those mufflers knitted for her poor sailors?"

"Was that all he said—just that she was a good boat?"

"Oh, dear me, no! The important thing was that in some mysterious way the second time they attempted to take her out they found that she had been damaged. No one knows how. They repaired her again, and tried her out; but again she had been damaged. Of course they suspected that some member of the crew was in the enemy's service, but they can't locate anyone who is even suspicious. Although this letter doesn't say so, I judge that they have been trying her out very near here. You know there used to be a naval station south of here."

Another idea had occurred to Eugenia.

"Does Mr. Stackpoole ever read the papers when he comes here?" she asked.

"Oh, yes; always. He asks me what news there is, and then he looks over the papers himself. Oh, I do think this Stepham affair is simply terrible! Several lives have already been lost through the machinations of those fiends who are trying to wreck her."

When Eugenia went back to her room she carried with her that section of the paper which told of the Stepham's plight.

She put on a dress of soft rose color, hoping that its glow would lessen the pallor of her cheeks, and tying on a wide-brimmed hat, she went down-stairs.

It was partly with relief and partly with regret that she realized that her guest was not in sight; for, although the thought of seeing him was painful, the thought of not seeing him was unendurable. She went out into the garden. As she turned the corner she saw him sitting on a bench beneath an orange tree.

"Oh, but I am glad to see you!" he exclaimed. "How is your headache?"

Never had his voice seemed so magnetically sympathetic. For the moment she could not believe that last night had ever existed.

"I am much better. Come, let's pick some roses for Aunt Sarah."

He looked as if he would have preferred more personal conversation, but he acquiesced.

"Shall we pick red or pink?" he asked.

"Both. If we get only pink she's sure to say they are very pretty, but she has always preferred red. And if we get only red, it's sure to be pink she likes. Unless, of course, *you* took them to her. As Liza says, you must have her 'hyptized.'"

What Has Gone Before

AS Eugenia Stepham sat before the fire early one morning during a terrific storm which swept across the island where she lived alone with her aunt and two old servants, the doorbell pealed. The unexpected guest was a man, evidently ill and weak from exposure. She welcomed him. When he was warmed and had eaten breakfast with her, he started to leave, but fainted at the door. The servants took him to Eugenia's dead father's room and cared for him. He told Eugenia his name was Carl Stackpoole, though the contents of his traveling bag were monogrammed R. K. M., and gave a flimsy reason for his presence on the lonely island. In spite of these contradictions, she realized that she was falling in love with the stranger, and he did not conceal his admiration for her. Then one night Eugenia saw him stealing away from the house and down to the sea.

Then she remembered that within half hour she had discovered a possible ason for his devotion, in no way con-cted with a desire to please Miss irr, and she was silent.

After her basket had been filled she t down on the bench, glad to bask in e sun, and he sat cross-legged on the ass, smoking a pipe with an air of ep contentment. A horrible idea me to her—could he be merely pre-nding to love her with some possible in in view?

He seemed to divine her thoughts. e looked up at her with an expression his dark eyes which she felt must ex-ess genuine emotion.

"I love you, Eugenia," he said. "Oh, w I wish I had the right to tell you w much I love you!"

She could not speak.

"But I must not talk like this!" he claimed, springing to his feet. "Eu-nia, would it help you to forget about ur headache if we were reading oud?" She was glad to acquiesce. As was finishing the story the luncheon ll awoke Eugenia to a sense of the aster she knew must be upon her.

If only she were not the kind of man to whom love comes but once! e thought of Aunt Sarah and Charlie ingerfield; but how much worse, in-itely worse, this would be!

As she got up to go into the house the an, as if sharing her unhappiness, essed her hand to his lips. "Dearest all the world!" he said. Yet, although words warmed her heart, she heard them a note of sadness, as if he eved for something that might have en but was now impossible.

ZA, grinning broadly, was waiting at the door of the dining-room.

'I'se done got good news, Miss 'Genia! daughter Lucy, that married that rthless nigger Henry Washington, s got a baby girl. And she's going name it for you, Miss 'Genia—exactly er you. Ole Sam's most tickled to ith."

'I don't wonder. I'm delighted too. d I shall go to see her this very ernoon."

'Isn't it too far for you to walk?" the n asked as they sat down at the table.

'No, indeed. It's scarcely three miles, re and back. She lives in one of se cottages at the end of the island, know. The fresh air will do me od." She expected him to offer to ompany her, but he said nothing ut it.

t was hard for her to reconcile his ntradictions. Before she had met n, life had seemed a simple thing to genia Stepham; now it semed cruelly nplex. There was no one in all the rld to whom she could go for guid-ce, and she felt woefully alone and ompetent. She had always supposed t when love came it smoothed out all ficulties and swept away all obstacles, to her love had brought the most assing, the most saddening problems her life.

Unaware of how much nearer a solu-n she would be when next she saw n, Eugenia started after luncheon, rying a large basket of tribute for namesake.

Having admired the baby until her fectives were exhausted, Eugenia rted home by a roundabout road ich led along the beach for some dis-ce.

Suddenly her keen vision detected a all boat bobbing up and down some tance from the shore. It astonished to see so small a craft in these wa-s, and she speculated idly upon its stination.

To her consternation she saw that it s heading directly for the spot from ich she had seen Stackpoole disap-ar the night before.

Hastily she slipped behind the giant es, confident that she had not been n and should not be. She was sure t there was something sinister in the at's approach, for the only proper ding was some distance away, and s the boat had avoided, seeking in-ad the more hazardous but concealed ding for which it was now making.

She moved swiftly along, sheltered by e heavy growth of trees and foliage, til she had reached a secluded spot m which she could not only watch e approaching boat but also the path wn which she had seen her guest me the night before.

She saw a man jump out of the boat, ll it on shore, and then glance up and

NEW PERFECTION
OIL COOK STOVES

Save Coal for the Factories Whose Products *You* Need

THAT is practical patriotism. Every factory is *essential to someone*. And every household, on the farm and in the city, must *save* coal to keep the factories going that are so *necessary* to America's prosperity and winning the war. You can save *all* the coal used for cooking—burn kerosene oil.

Use a New Perfection Oil Cook Stove

The U. S. Fuel Administration authorizes us to say that it considers the use of oil cook stoves and oil heaters at this time a very important help in the necessary conservation of coal for war purposes.

The New Perfection Oil Cook Stove, in addition to saving coal, lightens your labor and makes you forget the drudgery of the coal hod and the ash pan—gives you gas stove comfort at kerosene cost.

The Long Blue Chimney Burner gives you clean, intense heat—no soot—no smoke—no disagreeable odor. It lights and heats instantly, like gas—no time wasted in generating. Flame *stays* where set, high or low. When operated at highest flame, the Long Blue Chimney Burner is the cleanest, fastest cooking oil burner made—as dependable as gas.

3,000,000 homes use New Perfection Oil Cook Stoves.

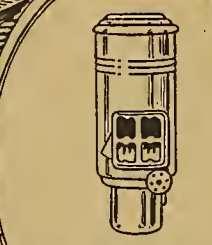
All New Perfection Burners are made of brass and give satisfactory service for years.

New Perfection Ovens bake to perfection because of correct heat circulation. Have glass doors. Fit any stove. On doors of two-burner ovens, a patented three-point locking device, controlled by one handle, prevents waste of heat.

Buy your New Perfection Oil Cook Stove, Oven and Water Heater at any good hardware or housefurnishing store, or write us for booklet

THE CLEVELAND METAL PRODUCTS CO.
7410 Platt Avenue Cleveland, O.

Made in Canada by the Perfection Stove Co. Ltd., Sarnia, Ontario



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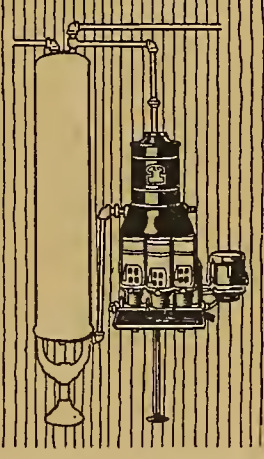


COMPLETE THE KITCHEN with the New Perfection Kerosene Water Heater. Attaches to any tank without disturbing other connections. Most efficient with 30-gallon tank. Gives quick, abundant hot water at minimum cost, summer and winter, for dishes, laundry and bath. Uses the famous Long Blue Chimney and Brass Burners—same as the cook stove. Ask your dealer

SAVE THE NATION'S COAL

"—But You Can Make $50 Weekly!"

"But you don't have to be boastful and bold. You don't need to be smooth or enticing. You don't require personality and 'nerve.'

"You imagine difficulties where there are none You magnify obstacles that are trivial. You exaggerate troubles and trials that are really nothing but fancies.

"Nothing is needed but 'horse sense'—plain, everyday, honest-to-John 'horse sense.' You CAN make $50 weekly if you say to yourself, 'I will.' "

YOU CAN MAKE $50.00 WEEKLY

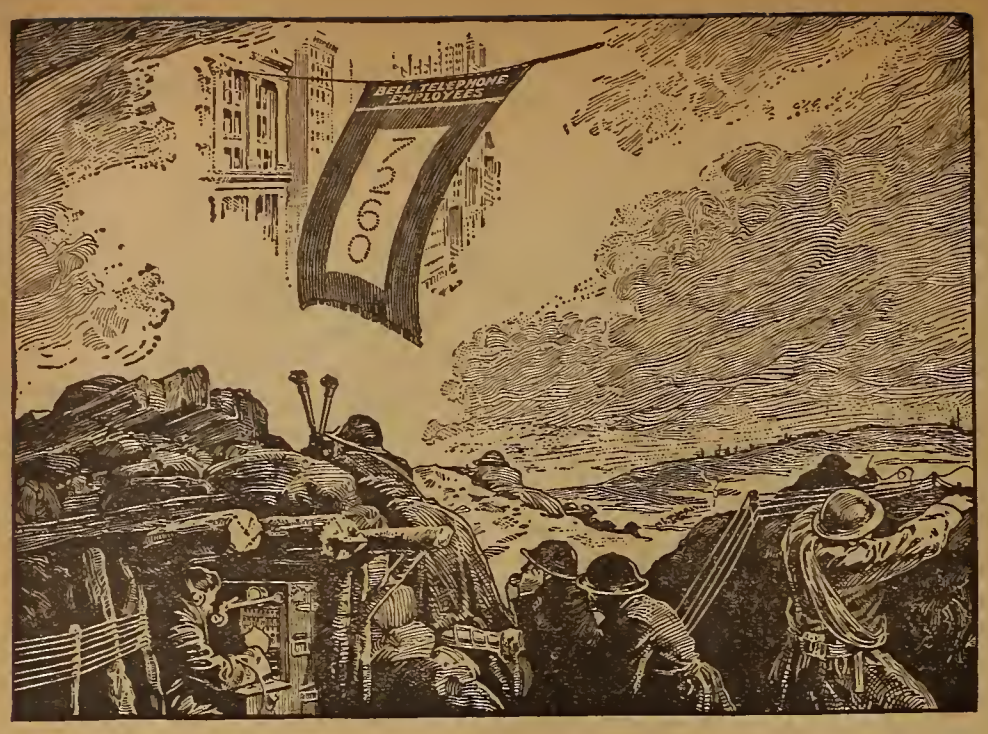
This is the substance of what we have said to many young men and women. Again and again it has helped them decide to grasp the first opportunity of their lives. Again and again it has proven the turning point where they began traveling the road to success.

You can make $50.00 weekly. You can make it consistently and anywhere, by acting as FARM AND FIRESIDE'S representative. With our striking new offer, and help, you cannot fail to make good.

SEND US YOUR NAME TO-DAY

These are the things to consider: Do you want more money? Do you want more experience? Do you want to climb higher? If you do, then send us your name and address to-day. Address,

FARM AND FIRESIDE Agents' Dept. Springfield, Ohio



In The Nation's Service

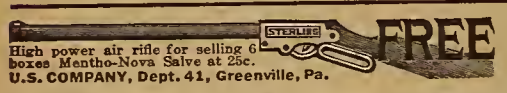
America is sending its best men to fight for freedom and in their honor the whole land is dotted with service flags carrying the stars of sacrifice.

It is a far cry from the crowded city streets above which floats our service flag to the telephone exchange hidden in the front-line trenches. But the actuating spirit of service here and abroad remains unchanged.

The Stars and Stripes is the emblem which unites us in war for human liberty and national honor. The service flag is the emblem which unites us in mutual sympathy for the men who give themselves and for those who give their men.

These flags should inspire all citizens to greater endeavor and greater sacrifice. As one of the agencies of preparation and military support, the Bell System is honored by the opportunity to do its share.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY
AND ASSOCIATED COMPANIES
One Policy *One System* *Universal Service*



High power air rifle for selling 6 boxes Mentho-Nova Salve at 25c. **FREE**
U.S. COMPANY, Dept. 41, Greenville, Pa.

GIVEN Stem wind and set watch, **guaranteed 5 years**, for selling 25 art and religious pictures or 25 pkgs. post cards at 10c each. Order your choice.
GEO. GATES CO., Dept. 220, Chicago

SALESMEN!

New Kerogas Burner
Burns Common Coal Oil (Kerosene)

Makes any stove a gas stove. Easy to install. No trouble to operate or keep clean. Absolutely safe. Cheapest fuel known.

Burns Just Like Gas

No kindling to cut—no coal to carry—no ashes to empty. No more danger from gasoline. The Kerogas is absolutely safe. The high price and scarcity of coal makes this burner sell like wild fire. Almost every home a prospect.

Showing Burner in Stove

Clean, Odorless, Cheap, Wonderful Labor Saver

The Kerogas pays for itself in a very short time. Get busy quick on this new, big money-making proposition. Women wild about it. Low price makes quick sales. Big profits. Easy to carry and demonstrate. Your territory open. Write quick for demonstrating sample.

Thomas Burner Co. 3346 Gay St. Dayton, O.

You Can Earn $25 to $40 Weekly

Mr. P. Crow of Texas earns many times that amount.

ANY person of average intelligence can earn a good income by representing *Farm and Fireside* at county fairs and other gatherings which attract farmers and their wives. Mr. Crow says:

> "*Farm and Fireside* is easy to sell because it is recognized everywhere as a paper that helps farmers in a practical way."

You can do what Mr. Crow has done. Write for our terms. Address Agents' Department

FARM AND FIRESIDE - Springfield, Ohio

down the beach as if fearful of being observed. Apparently satisfied that no one was in sight, he walked straight up the beach, as if counting his steps. Halfway between the water and the outstanding trees of the forest he stopped, knelt down, and began digging into the sand with his fingers.

He pulled up something which seemed to the girl to be a small box, drew something white from his pocket, placed this in the box, again buried the box, and re-covered it with sand.

He looked all around once more, then went hastily back to his boat, pushed off, jumped in, and in another second was rowing hard away from the shore.

The entire incident had not taken more than a minute by actual time, but to Eugenia it was as vivid as if she had seen it enacted over and over again. She knew that she would never forget that scene in all her life.

The boat seemed to move with agonizing slowness, for she was now filled with fear lest Stackpoole appear at any moment. She had no doubt that whatever had been placed in the box in the sand had been put there for him, and it occurred to her that perhaps the reason for his not accompanying her on her visit to the end of the island had been due to his desire to receive this message as soon as it arrived.

Fortunately she knew that the path which he would take was straight. She ran to it, and could see that he was not within a quarter of a mile of the beach, at least.

As soon as the boat was at sufficient distance she went immediately to the spot where the box was buried. Kneeling on the sand, her strong, slender fingers tore at the sand and then—the box.

It was an oblong, water-proof affair of ordinary exterior, but her hands trembled as she flung up its cover. Inside was a folded piece of paper. She drew it out eagerly and her eyes grew large as she read these words, written legibly, in English:

> Carnations desire water for feeding sheep. Implore violets assistance with churning. Even cattle rampant. Though nasturtiums unable. HEREAFTER.

"Gibberish!" she said aloud.

Then suddenly she knew. "It's a code message!"

She had not thought what she should do with the contents of the box after she had seen them, but now she saw what her course must be.

By good fortune she had in her pocket a notebook and pencil which she had taken to the cottage in order to make a memorandum of necessary repairs. Still crouched in the sand she copied word for word the mysterious message. She put the box back into place, covered it carefully, and concealed her own footsteps as she retraced them.

AS SOON as she reached her own room she rang for Liza. Having recounted the story of the old woman's granddaughter, Eugenia looked her servant squarely in the eyes.

"Liza, will you do something for me—just exactly as I tell you to?"

"'Deed I will, Miss 'Genia. Reckon I'd do most anything in all the world for you."

"This is a strange thing to ask you to do, and you are to say nothing about it to another soul. No one is to know a word about it excepting you and I, not even Sam."

"'Deed I don't tell that nigger everything," said the old woman, with a chuckle.

"You know that red leather book that Mr. Stackpoole always carries in his coat pocket?"

"'Deed I do. I reckon that's the book what's got his black magic in it. He seems to set a powerful store by that there book."

"Yes, that's the one I mean; only, of course, it hasn't black magic. Now, Liza, listen carefully. He doesn't keep that book in his pocket in the evening because he has no pocket in his dinner coat large enough to hold it. Therefore he probably leaves it in his da coat. Now, when we are at dinner want you to get that book, take it into the pantry, and then call me out fro the dining-room. Do you understand?"

"Yes'm, I understand 'zactly." Sh repeated Eugenia's instructions accurately.

When Eugenia entered the dining-room a few minutes later she saw Stackpoole standing in front of the open fire.

"It's comforting, isn't it?" he said nodding toward the bright blaze. "Bu it is sad too. It reminds me so forcibly that summer is almost over, that nothing can last. Eugenia, I am sad tonight. The thought of going away from here tears at my heart."

"You are going away?"

"I must."

"When? I thought you had promised Aunt Sarah to stay for a month."

"That is impossible. I do not know now just when I shall go, but I think it must be soon. I am quite well now thanks to your wonderful hospitality; and, besides, I have matters which demand my attention."

WHEN Liza came in with the sou she gave her mistress a knowin wink.

"'Scuse me, Miss 'Genia, but some-one's out there and wants to see yo mighty bad. I said you was at you dinner, but i didn't seem to mak no difference wha I said."

"That's all righ I'll go and see wh it is. You'll excuse me?"

Stackpoole ro as she rose, and sh hoped that he coul not see the trembling of her knees beneath the soft folds of her amber-colored gown.

When they were safe in the remote pantry, Liza whispered in great excitement:

"I'se got it, Miss 'Genia. Here it is."

With a proud flourish the old woman took from the ample pocket of her black skirt the red leather book.

Eugenia's hand shook as she reached for it.

"Now you must serve the rest of the dinner," she said. "I'll let you know when I've finished with this, so that you can take it back again where you got it."

Liza looked as if she were reluctant to leave before the container of "black magic" had even been opened, but she obeyed at once.

Eugenia hastily turned the pages of the book. Her face whitened as she perceived that in it she really had found the key to the mysterious message. She withdrew from the bodice of her gown the small notebook in which she had written in the afternoon, and jotted down from the leather book the equivalent for each word of the message.

Before returning to her guest, Eugenia rubbed her cheeks vigorously with her fingers, and endeavored to assume a smile. Fortunately the room was lighted only by an open fire and shaded candles, so that she was sure he could read nothing from her face.

When they were settled in Miss Burr's room, Eugenia excused herself and went quickly into her own room, and wr the words which were to bring her affairs to a crisis, and which were vitally to affect her life and that of Carl Stackpoole.

When at last she affixed her signatur she felt as if she had signed away of her youth, her chances for happines and her love.

Suddenly it seemed to her that she could not send this letter. Then to fortify herself she drew out the tiny notebook and read again the deciphered message. A chill came over her. N again could she waver from the p of duty, no matter how agonizing. T message, now that she had learned key, said:

> Last safe boat leaves twenty-third. Your departure from country before enemy leaves of our work on Stepham imperative for future success. THE ONE IN AUTHORITY.

[CONCLUDED IN NEXT ISSUE]

Notice to Subscribers

UNCLE SAM is moving so many troops and so much equipment to France these days that the railroads are badly congested. This means that not all of the mail trains are running on time. If your copy of FARM AND FIRESIDE doesn't reach you promptly, please wait a few days before writing. The magazine will probably be in your hands by that time.

THE EDITOR.

Your Own Flower Garden

EVERBLOOMING ROSES

Six Choice Varieties Especially Grown for FARM AND FIRESIDE Folks

EVERYBODY loves roses! We know our FARM AND FIRESIDE friends will appreciate the opportunity to secure the six choice rose bushes we offer them this year. From the list of hardy everbloomers, we have selected these six varieties, each of which has been thoroughly tested for its blooming qualities in all localities. We offer them to you and do not hesitate to guarantee them as the best of their class and color for general planting.

Wouldn't you be proud to have these bushes loaded with beautiful fragrant roses, growing in your yard, to be envied and admired by all who pass by? In no other way can the home surroundings be so quickly improved or more pleasure be derived, than in the planting and growing of a rose collection such as this. They will produce magnificent masses of large double flowers, fascinating in form and of a deep rich color and will bloom every month of the growing season.

Guaranteed to Grow and Bloom

The plants we offer you are one year old, own root, pot grown bushes, which may be transplanted at any time without checking their growth or injuring their blooming qualities. They have not been forced to flower, but have been especially grown and stored in cold houses where they rest as nature demands. When delivered to you they will be in proper condition to plant and will take root and begin to grow with the first warm days of spring. We will ship them to you at the proper planting time for your section. This will be approximately as shown by the planting schedule below.

Table for Planting Rose Bushes

Latitude of Tex., Calif., Fla.....Feb. 1	*Latitude of Nev., Kan., Mo.....Apr. 1*
Latitude of Ariz., Okla., S. C.....Mar. 1	*Latitude of Iowa, Ohio, W. Va.....Apr. 15*
Latitude of Wash., Tenn., Va .....Mar. 15	*Latitude of Mont., Mich., N. Y. and all N. E. States ..... May 1*

The time devoted to the planting and cultivation of these bushes will prove a pleasure and the first flowers produced will amply repay you for all the attention given. The idea that roses are difficult to grow is incorrect as they will thrive in any good garden soil. Simply keep the beds free from weeds for a short time after planting and you will assist the bushes to become established more quickly and will have the pleasure of seeing them flower the first season.

You May Have the Collection of Six Rose Bushes Described Below with Farm and Fireside THREE Years for 75 Cents

Or we will send you the Rose Collection and Farm and Fireside ONE year for 50c. Clip out the coupon below and mail your order TO-DAY. These offers are good until April 1, 1918, only.

Special Club-Raiser Offer: Send us a club of THREE yearly subscriptions to FARM AND FIRESIDE at 25 cents each (your own subscription can be one of the three) and we will send you the Six Rose Bushes all charges prepaid. For each extra subscription club of three you send we will mail ONE ADDITIONAL ROSE COLLECTION.

Shipping Charges Prepaid on Each Collection

Description of Varieties:

This collection is made up of six hardy bushes, selected for their blooming qualities. The colors range from a deep red through shades of pink, white and yellow.

Red-Letter Day A fitting name for this brilliant colored rose. Its velvety, glowing, scarlet crimson buds and flowers are the most pleasing shade and this **1** rich deep hue is retained as long as the flower lasts. Cactus shaped, moderately full flowers are produced freely and continuously.

Rhea Reid A most beautiful and thoroughly distinctive rose. It is a strong, healthy grower. The color is a vivid scarlet crimson and the flowers are very **3** large, full and of perfect form with high center. An invaluable decorative rose; fragrant, and in every respect adapted for garden planting.

Radiance Radiance is one the greatest rose creations of modern times. Vigorous in growth. Flowers of immense size are produced in masses, the color is a beauti- **5** ful blending of carmine rose shades with opal and coppery reflections, extremely brilliant in effect.

Dorothy Perkins One of the most valuable climbing roses of the hardy varieties. It produces im- mense clusters of large perfectly formed roses. The color is **2** an exquisite shade of clear shell pink, deepening to a darker shade near the center. Foliage is extraordinarily beautiful, the richest deep green in color.

Melody This rose is the result of years of effort to produce a genuinely yellow rose in the hardy ever- blooming type. It grows to perfection in any ordinary **4** garden soil. The color of the flowers is a lovely shade of yellow, deepening to apricot in the center.

White Cochet A most magnificent snow-white rose; of vigorous growth and profuse blooming qualities. It is absolutely hardy in every part of the **6** country. The buds are large, full and firm, elegantly pointed, the magnificent pure white flowers open perfectly double and possess an exquisite fragrance.

Your Rose Bushes will be shipped with all charges paid at proper planting season for your section. Full cultural directions with each collection.

Send Your Order to

FARM AND FIRESIDE - - Springfield, Ohio

Special Rose Bush Coupon

F.F. 137

Farm and Fireside, Springfield, Ohio

Gentlemen:—For the enclosed $..... please {extend / enter} my subscription to FARM AND FIRESIDE for ..... years. Also send me, charges prepaid, at proper planting time for this section your **Collection of Six Rose Bushes** as per your offer in the March FARM AND FIRESIDE.

Name .....

P. O. .....

St. or
R. D. No. ..... State.....

Note—If you are already a subscriber to FARM AND FIRESIDE you can send your renewal order now and your new subscription will be extended from the expiration of your old one. Be sure to have your order in by April 1st, at the latest.

STOP!

Just stop and think a minute!

Be serious about this matter!

We have got to double, and triple if possible, the production of food stuffs this year. It positively can be done if you make up your mind to do it, and we must do it! Which means you have got to grow double the garden you did last year, so we can all live on more vegetables and less wheat, corn, beef and other necessities needed to win the war!

If you can't go to the trenches and fight with a gun, you can stay at home and double your garden and fight with your hoe!

Stop! Think! Just think of the hundreds of thousands of tons and the tens of millions of dollars' worth of food stuffs that have gone down to the bottom of the sea! That food does nobody any good. It never will be consumed by anybody. It is gone. The only way to quickly replace it is to conserve the highly concentrated foods like mentioned above and live on and grow more vegetables. That's why I want you to send for one of our special **Win-the-War Garden Collections—NOW**—while you read this ad! It's different from anything ever offered before in the seed business. It has more real value, and if bought at retail would cost almost double the introduction price we ask! We give you more than we advertise. Simply pin a dollar bill, check, draft or money order to this ad, cut it out and mail it in.

"If you can't go to the trenches and fight with a gun you can stay at home and double your garden—fight with your hoe! You have known of me for years and have heard of the genuine bargains we always give. No further introduction to Galloway is necessary. It's now your move. I'll do my part."

All Regular Size Packets

ABSOLUTE SATISFACTION GUARANTEED OR YOUR MONEY REFUNDED.

If bought singly would cost about twice as much

WIN-THE-WAR GARDEN $1

Biggest and Best Offer Ever Made

Food will win this war! Grow your own and help toward victory. Galloway's famous War Garden is especially planned to have you help! Besides, this superb garden seed assortment will make you an annual customer for Galloway Bros. pure tested seed.

ORDER DIRECT FROM THIS ADVERTISEMENT — Pin a dollar bill to your letter (we trust Uncle Sam's boys) and we will send you postpaid the garden seed collection pictured here; a quantity of fresh, pure, tested, profitable seed for a garden 100 x 50 ft., and sufficient to supply a family of six with fresh vegetables during spring, summer and fall. Order now—today. Get yours before the supply is gone and be ready the instant planting time comes. Money back if not satisfied.

I Want 100,000 New Customers This Year!

This great Win-the-War Dollar Seed Offer will win me that many new customers. Look at this list of twenty different packets of seed included in this great dollar war assortment.

One Box Sweet Corn (Golden Bantam)
One Box Beans (Golden Wax)
One Box Peas (Excelsior)
One Pkt. Lettuce (Big Boston)
One Pkt. Lettuce (Summer Favorite)
One Pkt. Beets (Little Gem)
One Pkt. Tomato (Ponderosa)
One Pkt. Muskmelon (Rockyford)
One Pkt. Radishes (Sparkler)
One Pkt. Radishes (French Breakfast)
One Pkt. Turnip (Snowball)
One Pkt. Carrot (Danvers Half Long)
One Pkt. Beans (Dreer's Bush Lima)
One Pkt. Cabbage (Copenhagen Market)
One Pkt. Parsley (Moss Curled)
One Pkt. Cucumber (Improved Long Green)
One Pkt. Onion (Red Globe)
One Pkt. Squash (Warted Hubbard)
One Pkt. Sweet Peas (Giant Flowering)
One Pkt. Asters (Giant Victoria)

Remember, each package and box is regular full size, and if bought singly would cost you about double the price. You take no risk whatever when you buy direct from this advertisement. **Your money will be returned to you instantly if you are not satisfied.** Order today sure, direct from this ad. With every order we will include

MY 1918 PLANTING GUIDE AND SEED BOOK FREE

USE A POSTAL—ASK FOR IT NOW!

Tells why our Pure, Tested Farm, Garden and Flower Seed grows the biggest crops—the finest flowers. A beautiful 112-page book in colors: Describes new 1918 varieties, vegetables and flowers. Handsomely illustrated; beautiful home grounds, flower and vegetable gardens, landscaping, shrubbery, orchards, farms. Veritable dictionary on gardening! Flower lover's delight! Berry growers' book! An orchardist's manual! Plan your 1918 garden from this valuable book. It's **Free.** Send for it today whether you order the Win-the-War Garden or not. A postal brings it.

GALLOWAY BROS. & CO.
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Dept. 39.
Waterloo, Iowa

SOLVE THIS PUZZLE

Get a Valuable Prize [S][O][L][I][D][W][O][N][W][O][R][D][O][W][L]

In the diagram above there are thirteen letters. They can be rearranged to spell the name of some great man. Can you tell who the great man is? A beautiful prize given for each correct answer. You will be greatly pleased with it.

I want to get new members for my Bicycle Club. Besides the beautiful prize, I will give each boy or girl who solves the puzzle 10 bicycle tickets without cost. Four bicycles, trimmed in silver, given away to those holding the most bicycle tickets. Moving picture machines and hundreds of other prizes given also. Send your answer to the puzzle. Enclose four cents in stamps to cover cost of mailing and packing the prize. Address **See'y Bicycle Club, Dept. L, Farm and Fireside, Springfield, Ohio.**

Burn 8c Kerosene in Fords

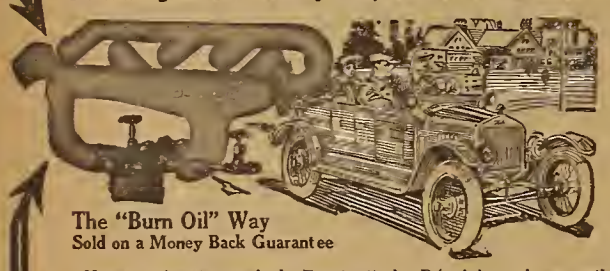
ONE gallon of cheap kerosene will give greater efficiency with our Burn Oil Device than a gallon of gasoline. You go more than just as far for less than half as much. Cuts fuel cost to approximately ⅓c per mile.

Thousands Giving Good Service In Operation Today

Following letters are only sample of letters received:

Burn Oil Device Co., Center, N. D.
Peoria, Ill. Sept. 6, '17.
Gentlemen:—Enclosed find check in full for ten devices. I can say for your Burn Oil Device that it does more than you claim. I make 23 miles per gallon of cheap kerosene.
Yours truly, N. O. Nelson.
P. S. I am waiting for my contract for Oliver and Marten Counties; have sold 20 devices without asking anyone to buy from me.

Burn Oil Device Co., Du Bois, Pa.
Peoria, Ill. Aug. 24, '17.
Dear Sirs:—I tried the Burn Oil Device out, and it is working fine. I have run about 300 miles this week and have run it on one third the cost of gasoline. I have advertised the device and Ford owners are getting anxious for them. I would like a contract for Jefferson and Clearfield Counties.
Yours truly, L. W. Smiley.



The "Burn Oil" Way
Sold on a Money Back Guarantee

No new carburetor required. Easy to attach. Price is low. Soon pays for itself. No trouble with spark plugs. Nothing to get out of order. Nothing mechanical added to your motor. Hence, what our device does on one car, it will do on another. This is the greatest economy device for Ford cars ever designed. It pays its purchaser dividends every time he buys fuel. We want good live agents everywhere. Get our proposition now.

Burn Oil Device Co., Inc. Dept. F.F. Peoria, Ill.

An Old Man's War Garden

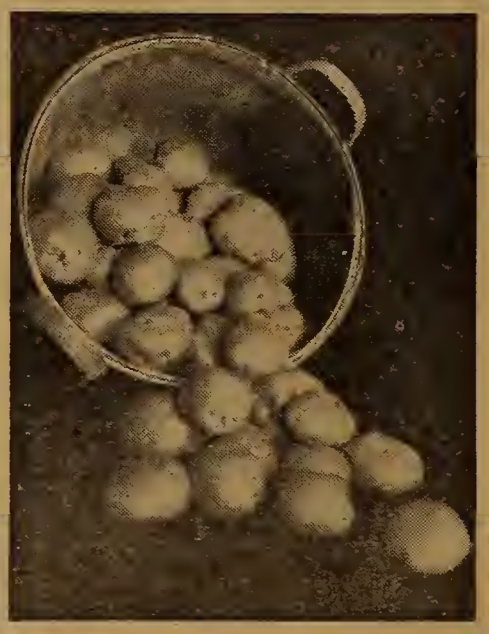
By E. L. Vincent

FOR the encouragement of "retired" farmers and formerly active business men generally, I want to outline how I did my bit for the war last year, and hope to do as well or better this year, helping to uphold Uncle Sam's hard-worked hands.

It was unusually late last spring when the crop-seeding work on my son's farm could be got under way, it being a cold, wet spring. Naturally he hardly knew what to tackle first, with so little help to be had. There was absolutely no chance for him to undertake gardening, so I telephoned him to consider that would be "Dad's" job. I have reached the age when it is the fashionable thing for a farmer to "retire," but I shall not follow this fashion while the war lasts at least, if my strength holds out.

When I arrived on the scene, I found that Son was more than generous in the garden land furnished me, but he had done his part well in fitting and fertilizing the big garden plot.

The hot weather came at a bound, and each midday found me "wilted," but I disregarded union hours and made good progress mornings and evenings. The result was that, though late in getting started, an abundance of a wide variety of "garden sass" was soon ready for my son's household, his workmen, and my



Aim to grow rounded, shallow-eyed varieties which waste less in peeling

own family table. By repeated planting and the use of early and later varieties, I kept the tables groaning with fresh, tempting produce that left little of our living to be purchased from commercial sources. Having a good garden, milk, cream, fresh eggs, poultry, fancy cornmeal, and one's own flour (used sparingly), it's a mighty poor cook that can't keep the farm family in good working condition to furnish food with which to fight the Kaiser.

One material help I had was the best possible seed secured direct from a trustworthy seedsman. This made no replanting necessary. Using poor seed is always a losing venture.

Start Onions Under Glass

By M. K. Hays

I HAVE found it more economical to raise onions from seed than from sets, where a crop of several bushels is wanted. Two ways have proved satisfactory in my experience. One is to start a hotbed in midwinter or early spring and raise seedling onions large enough to set out as early as it is safe to do so without danger of frost injury.

For late onions I have had good success by sowing seed as early as possible in well-fitted soil where weeds will not give much trouble. I rush the seedlings as rapidly as I can by using plenty of fertilizer rich in nitrogen, and by frequent culture. As soon as large enough to transplant handily, I thin the seedlings to the desired stand and reset the plants thinned out. By hurrying these early onions by intensive culture and liberal fertilizing I find it generally possible to get as heavy a crop as from my plants started under glass, but the latter are sometimes ready to harvest a month or more before those seeded in open ground.

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Two cupfuls scalded milk. Tablespoonful shortening. Teaspoonful salt. Compressed yeast cake. Tablespoonful sugar. Six to eight cupfuls flour. Quarter cupful tepid water. Dissolve shortening in hot milk, pour into bowl and cool till lukewarm. Dissolve yeast in warm water; add milk, sugar and salt. Gradually add flour to make stiff batter, stirring vigorously. Turn on floured board and knead ten minutes. Set to rise in warm place till double in bulk. Form into loaves, place in "Wear-Ever" bread pans, let rise again and bake forty-five minutes. For perfect results and greatest economy, use

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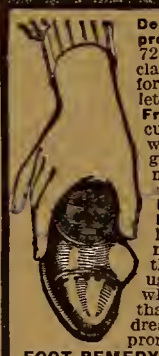

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Looking Your Best

How You May Dress Your Hair Becomingly

By MARGARET DRUMMOND

IT IS unfortunate, but true, that in many cases a beautiful picture is utterly spoiled by being placed in an unsuitable frame—a frame that, by reason of its shape or design, hides all the beauty of form and color in the picture. The frame may be in itself very beautiful, but if it does not fit the picture it would be better not to use a frame at all.

It is exactly the same with your hair, which is the natural frame of the face. Many a pretty face has been spoiled and the features distorted by the arrangement of the hair. At the same time, any plain face may be made attractive and interesting by a little study.

Fashion in hairdressing, as in clothes, changes very often, and just at the present moment simplicity—extreme simplicity—is the keynote. Straight, simple lines may not be becoming to every face, but these lines may be modified by a soft touch here and the adjustment of a braid there, which will still keep you in fashion. Study your own face, sit down in front of the mirror, and spend a few hours trying out different ways.

There are many ways of dressing the hair, but yours must be the one that will bring your best features into prominence, and at the same time hide the defects of which you are conscious. If your forehead is unusually high, do not drag the hair tightly back on the top of the head. If your hair is getting thin at the sides, dress it loosely there. If your ears are pretty, always show them.

The woman whose features are plump may comb her hair straight back from her forehead and at the sides. After pinning it into position, she must gather the hair up at the back and roll or braid it becomingly from side to side. Roll loosely, as any tightness in hairdressing is unsightly.

A flat coiffure is the best one for the woman with long, thin features, and she can add breadth to the face by puffing the hair at each side. A very pretty way of dressing, and one that is becoming to most faces, is to part the hair in three, making sure that the parting is perfectly straight. After dressing the side parts loosely over the ears in a dip, take the middle part and roll it in a high, Japanesy effect on top, pulling it down as low on the forehead as the face may require. Plain tortoise shell pins are the best ornament for this style.

A quaint hairdress, very much in vogue with the younger set at the present time, is one used by our grandmothers. It is accomplished by parting the hair on the side and, after softly waving and brushing into place about the face, bringing it down in bobbed fashion to the back of the neck, then pinning into place and braiding in two braids, which are coiled just over the ears. For dress occasions a flower may be placed in the center of each coil.

The French roll is still considered smart, and is good for both evening dress and with a hat. This is the easiest of all coiffures to arrange. After parting the hair in three, the front part is drawn back tightly or loosely, according to the shape of the face. Then one side is drawn right around the back of the head and pinned into position, after which the other side is drawn around and tucked in roll fashion, care being taken to keep the roll to the shape of the head. A little brilliantine will add to the desired smooth effect, but this must be applied very carefully. Put a few drops in the palm of the hand, rub the brush on this, and you will have all that is necessary. More will leave the hair sticky.

Now that we have gone back to high collars, the hair is worn off the neck, and the woman whose neck is short must see to it that her hair is worn well above the neck, and dressed very high, as this will give the appearance of length. After arranging the front part, the hair is combed high at the back of the head, and right on top is made into a large puff, pinned from side to side. A big, old-fashioned comb, stuck in at the angle which is most becoming, adds much to the effect.

Very heavy hair is most becomingly dressed in two long braids wound around the head either flat or piled up high above the forehead in coronet fashion. For the first, the braiding must be done at the back, and for the other the hair is brought up on top of the head before the work of braiding is begun. This is almost the only style of hairdressing that has held good through the ages—and it is considered just as good to-day as it was a hundred years ago. Very simple, flat oranments are the ones to use in this case.

White hair must always be dressed very softly. No matter what the arrangement is at the back of the head, around the face it must fall softly so as to bring out the full effect of the coloring. Jet pins or combs, by force of contrast, are very good with white hair.

Do not make the mistake of using puffs, "rats," or any unnatural pad in order to get an effect. These artifices are always quite apparent, and, in addition, are very bad for the scalp, causing an undue flow of perspiration, which invariably results in a weakening of the hair roots, dandruff, and a consequent loss of hair.

If the hair is thin, waving and fluffing will give it an appearance of being thicker. Waving, in almost every instance—with the exception of the very black Spanish type—adds a great deal to the effectiveness of a coiffure. If you are not one of the fortunate possessors of a natural marcel wave, soft curlers will do the work; but be sure that you use the soft kind, and be careful in putting them in as well as taking them out, or the hair will be broken.

White hair must always be dressed very softly

A Frenchwoman is always trim—there are never any loose ends flying. In this day, when hairpins are so cheap, there is no excuse for straggling locks. Use them freely, so that every end is kept in place. With the very fine ones, which so often fall out, it is a good plan to bend the points just a little after putting them in place. This will keep them from slipping.

The final touch to the coiffure is given by softening the hair all around the face, especially on the temples, where thinning hair begins to show first. Do this with a hairpin or a very soft "baby" brush.

NOTE: Miss Drummond will be glad to answer questions by personal letter if a stamped self-addressed envelope is enclosed.

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Timid-Heart Escapes

By F. E. BRIMMER

"EVENING, Musky Muskrat!" gayly sang out Timid-heart.

Musky dropped through the hole in the top of his dome-shaped home the instant Timid-heart's voice rang out.

"Ha, ha! Coward!" laughed Timid-heart. "You're the biggest fraidy-cat in the woods. Come out and listen while I tell you some news!"

Soon Musky Muskrat's head appeared above the roof of his home. In his mouth he held a wild onion, and when he had gone over to one side of the top of the house where he could reach water he sat down. Taking the onion in one handy paw, he reached down with the other and splashed water upon it, rubbing it briskly, for all the world just like a girl washing her doll's dress.

He looked so queer that Timid-heart had to laugh.

"Ba-a-ah! Ha, ha! You look so funny washing that onion."

"Save your laughter," squeaked Musky. "Honest, I wasn't afraid, and only went down cellar to get an onion. You see I've worked all night on this housetop and I'm hungry."

"Guess where I've been," whistled Timid-heart. "Just think of it—I've had my picture taken!"

"Your—picture—taken? Who did it?"

"The nice-smelling man who lives in a white tent at the head of Big Moose Lake, with his sweet-smelling mate and his man child," replied Timid-heart.

"Pooh! You think I believe that? But say," Musky continued in a serious tone as he glanced all about the shore, "this very night I saw and smelled Old Mike and his gun right across the lily pond there. I heard him mumble that he would soon set his traps to torture me, and he grumbled because he didn't have any deer meat in his cabin."

Musky had finished his onion and peered cautiously about as he spoke.

"I'll 'fess up that I was just a wee chunk frightened at first by the sound of your voice, 'cause I've been nervous all night about the threat of Old Mike."

"THINK I believe that?" bleated Timid-heart. "You know I scared you, and so you fixed up that story to scare me."

Straight up the mountain she flew, leaving behind the lily pond, the tamarack swamps, and the valley. After ten minutes of springing up hill, Timid-heart stopped near a singing brook.

"What's your bustle about?" questioned a gruff voice from the top of a near-by pine. Timid-heart looked up and saw Rings Raccoon sitting among the limbs.

"Fraid-calf!" she bleated. "What are you in the tree for? Ba-a-ah! You were frightened when you heard me coming. Come on down and I'll tell you something."

Rings scrambled down the tree trunk with a pine cone firmly held between his teeth.

"Look here!" he cried when he had reached the ground. "See this pine cone which I'm going to sample, and if it's good I'll eat it."

Rings walked to the bubbling stream and stepped out on a rock, where he sat down and washed his cone just as a boy washes a muddy golf ball. Timid-heart watched him a minute and then announced gayly: "I've had my picture taken. Think of that, Ringy!"

RINGS nearly fell off the slippery rock in astonishment.

"Your — picture — taken? Ho! ho! Listen!" he whispered, peering about into the forest. "I saw Old Mike this very night sneaking along in the moonlight. You take care or he'll shoot you or your friends with his gun."

"Do you suppose I believe that? You are a coward just like Musky Muskrat, and so you made up that story to frighten me."

"Well, you needn't believe me," retorted Rings. "Nor do I believe you ever had your picture taken. Why, I never—"

"'Course you never had yours taken, because you are ashamed of a tail that has black and white rings all wound around it!" snorted Timid-heart.

After half an hour's steady traveling Timid-heart came upon Flag-tail, a distant cousin. Together they raced and skipped about, young and care-free. Not once did Timid-heart remember the warning of danger.

Just at daylight the two frolicking deer discovered a pretty little glen in which wild hay grew.

"I smell salt," sniffed Flag-tail after eating grass a while.

"Here it is in this nice log," whistled Timid-heart, and together they began licking the salty wood.

"Crack!" snapped a gun. "Zing! Zing!" whistled the bullet. Timid-heart burst away on quivering, springy legs. Madly she leaped fallen trees and moss-banked brooks. When at last she stopped, she found herself alone. At that very moment Old Mike was carrying Flag-tail on his shoulders toward his cabin.

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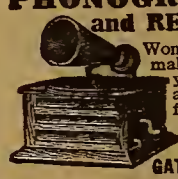

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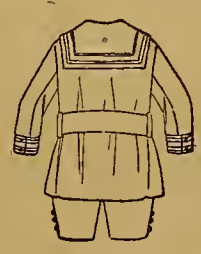

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434 Kaw-Neer Building Kansas City, Mo.

SOLVE THIS PUZZLE

Get a Valuable Prize

S	O	I	W	O	N		W	O	R	D		O	W	L

IN the diagram above there are thirteen letters. They can be rearranged to spell the name of some great man. Can you tell who the great man is? A beautiful prize given for each correct answer. You will be greatly pleased with it.

I want to get new members for my Bicycle Club. Besides the beautiful prize, I will give each boy or girl who solves the puzzle 10 bicycle tickets without cost. Four bicycles, trimmed in silver, given away to those holding the most bicycle tickets. Moving picture machines and hundreds of other prizes given also. Send your answer to this puzzle. Enclose four cents in stamps to cover cost of mailing and packing the prize. Address **Sec'y Bicycle Club, Dept. L, Farm and Fireside, Springfield, Ohio.**

I Will Send You This Phonograph Without a Cent of Money Down

I want to put one of my big, full-sized, Cabinet **MASTERTONE** Phonographs in your home, **without a cent of money down**—let you give it a thorough trial—compare it with any on the market, and if you don't find it equal to any costing double my price, return it at my expense. To prove this I will give you **10 DAYS' FREE TRIAL** and let you be the judge. You take no risk. The **MASTERTONE** plays any record—stands 47 in. high; 23 1-2 in. deep; 20 in. wide and guaranteed for life. For clearness of tone, quality of workmanship, material, style, size or finish, it is unsurpassed. Just write a postal for my Free Phonograph Book which fully describes this beautiful instrument—shows every detail of construction—tells why my price is less than half usual prices. My low, direct-from-factory selling plan on Split Hickory Buggies has saved buggy buyers thousands of dollars—NOW, I am doing the same for phonograph buyers. Write for this book and see for yourself.

NOTHING DOWN

PHONOGRAPH BOOK FREE Dept. 25

THE PHELPS FACTORIES Columbus, Ohio

They're Shaped in the Knitting Madam Without Seams

You'll like the soft smoothness of a seamless foot especially when you enjoy a smart snug fit along with it. The most practical stocking for you to buy—

BURSON

FASHIONED HOSE

Made in Art Silk, Mercerized, Lisle and Cotton

Sold at Leading Stores

Booklet Sent on Request

BURSON KNITTING COMPANY
83 Frey St.
Rockford, Ills.

EARN $1 TO $2 A DAY AT HOME

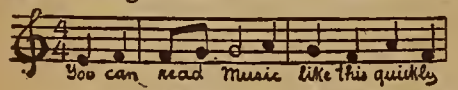
Help to meet the big demand for Hosiery for us and your Home trade.

Industrious persons provided with profitable, all-year-round employment on Auto-Knitters. *Experience and distance immaterial.*

Write for particulars, rates of pay, etc. Send 3 cents in stamps.

Auto-Knitter Hosiery Co., Inc.
Dept. 90 E, 821 Jefferson Ave., Buffalo, N. Y.

Music Taught in Your Home FREE



Piano, Organ, Violin, Mandolin, Guitar, Banjo, Etc. Beginners or advanced players. One lesson weekly. Illustrations make everything plain. Only expense about 2c per day to cover cost of postage and music used. Write for *FREE* booklet which explains everything in full.
American School of Music, 19 Lakeside Bldg., Chicago

36 POUND NEW FEATHER BED AND PAIR 6LB. PILLOWS $9.50

All New, Live, Clean, Sanitary Feathers, Best grade feather proof ticking. Satisfaction guaranteed. Write for catalog.
CAROLINA BEDDING CO., Dept. 122 Greensboro, N. C.

WERTHAN PAYS HIGHEST PRICES FOR EMPTY BAGS

CASH FOR EMPTY BAGS

We pay highest prices and also freight charges. Be sure to get our prices before disposing of your bags. They're worth money to yon and we'll pay you best cash price for them as soon as received and assorted. Write us at once stating how many you have.

WERTHAN BAG COMPANY
68 Dock Street St. Louis, Mo.

New Feather Beds Only $6.50

New Feather Pillows $1.25 per pair. All new, clean, sanitary feathers. Best ticking. Write for Illustrated Catalog.
SOUTHERN FEATHER & PILLOW CO., Dept. 122, Greensboro, N.C.

FREE LARGE GENUINE EASTMAN

Premo Film Pack Camera, for selling 25 beautiful pictures or 25 pkgs. post cards at 10c each. Order choice today. Sent prepaid.
GATES MFG. CO. DEPT. 620 CHICAGO

$1.95 Made to Your Order

Special Offer—to prove our fine quality: These fine Pants for Dress or Business, choice of many handsome styles, guaranteed for 18 months' solid wear and satisfaction or MONEY BACK, absolute $5.00 value—while they last, one pair to a customer, Express prepaid for only - - - $1.95

PANTS

No Extra Charges

No charge for big Extreme Peg Tops or Cuff Bottoms, nothing extra for fancy Belt Loops or Pocket Flaps, no charge for Open Welt Seams or Large sizes—all novelty features Free — no extra charges of any kind.

Cash Profits to you for taking measures of relatives and neighbors. Young George Gekovich made $66.16 in one day. Write for FREE samples today.

Chicago Tailors Association
Dept. L63, 515 S. Franklin St., Chicago

Send No Money

Ready to Wear

Straight from New York Shops
Spring Clothes You Can Buy
Through Farm and Fireside

No. 30—Eton Serge Suit. $15.95

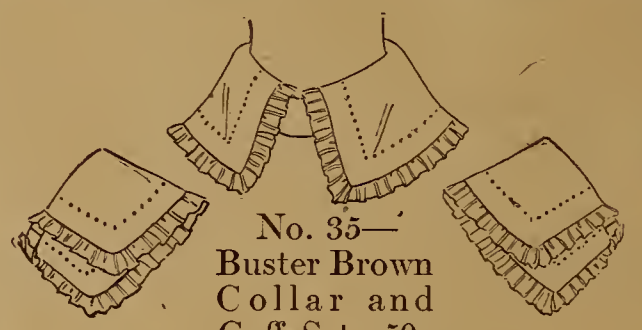
No. 31—Straw and Georgette Hat. $3.75
No. 32—Lace Collar and Cuff Set. 50c

No. 31—You could not find a more fashionable or useful hat than this. It can be worn with suit, silk or cotton dress. It smartly combines Georgette crêpe and straw, and it is simply but effectively trimmed with narrow ribbon and tiny flowers. Colors of hat: Brown, tan, navy, and copenhagen. Price, $3.75.

No. 32—You will find this set just the thing to dress up a frock or suit in the spring. It is made of imitation filet lace, cream color, with hem of white net. Price, 50c.

No. 33—Crêpe de Chine Dress. $13.95

No. 34—Gingham House Dress. $1.39



No. 35—Buster Brown Collar and Cuff Set. 50c

HOW TO ORDER: Send your order to the Fashion Editor, Ready-to-Wear Department, FARM AND FIRESIDE, Springfield, Ohio.

Be sure to state size and color. Write your name and address plainly. Remit either by bank draft, post-office money order, express money order, or check.

In case you send currency, be sure that the letter is registered. We cannot be responsible for money lost in the mails.

No garment sent C. O. D. or on approval. Your money back if you do not like the garments. All goods must be returned within seven days of their receipt. Return them direct to the firm who makes the shipment to you—not to FARM AND FIRESIDE—by insured parcel post or prepaid express. We cannot be responsible for return packages lost in transit unless sent as directed.

No. 30—The Eton suit is in high style for spring, especially when it includes a waistcoat. This suit is all-wool serge, navy blue or black, with the waistcoat white linen. Misses' sizes, 16 to 18 years. Women's, 36 to 44 bust. Price, $15.95.

No. 33—For dress-up times this embroidery-trimmed dress of crêpe de chine is very charming. Colors: Black, navy, copenhagen, or gray, with self-colored hand embroidery finished with gold tinsel. Misses' sizes, 16 and 18 years. Women's, 36 to 44 bust. Price, $13.95.

No. 34—A practical house dress of checked gingham in blue, lavender, or black, trimmed with white pipings and a touch of embroidery. Sizes, 36 to 46 bust. Price, $1.39.

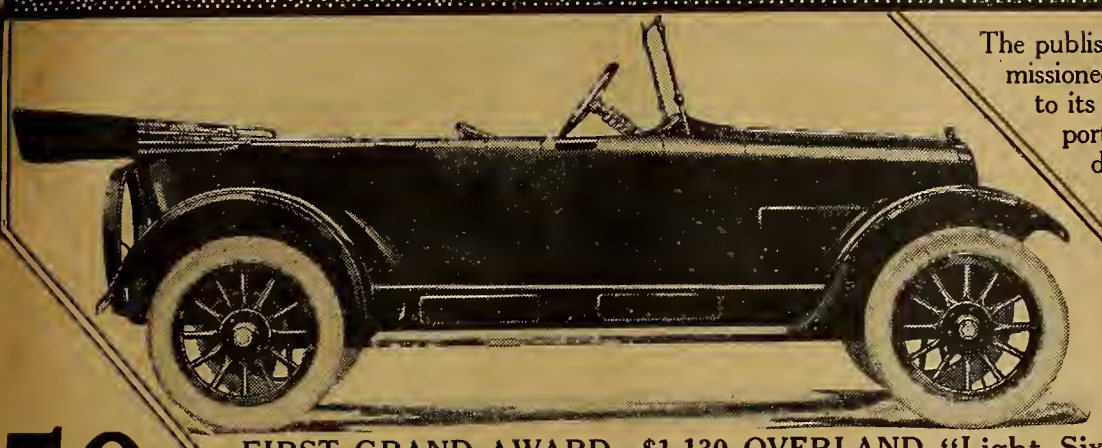
No. 35—The new Buster Brown collar and cuff set of white batiste trimmed with hemstitching and a picot-edged frill. Price, 50c.

No. 36—Waist of fine white cotton voile trimmed with dainty hand embroidery, lace edging, and lace medallions. Sizes, 36 to 44 bust. Price, $2.

No. 37—The box-plaited skirt is fashionable and serviceable especially when made of wool serge in blue and green plaid, or blue and red plaid. Sizes, 24 to 30 waist; length, 35 to 41 inches. Price, $4.90.

No. 36—Lace-Trimmed Voile Waist. $2
No. 37—Plaid Wool Serge Skirt. $4.90

I Have Four More AUTOMOBILES To GIVE AWAY



FIRST GRAND AWARD—$1,130 OVERLAND "Light Six"

The publishers of FARM AND FIRESIDE have commissioned me to make another Grand Prize Offering to its readers. If you have never yet had an opportunity to take advantage of one of these wonderfully liberal offers, you should by all means get into this latest and greatest GRAND PRIZE DISTRIBUTION. Over $3,500.00 in practical, worth-while awards will be given.

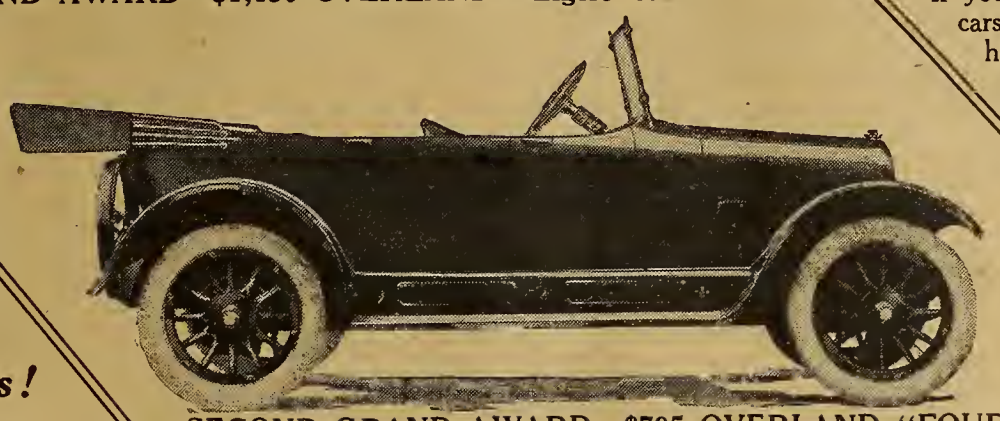
T. R. LONG, *Contest Mgr.*
FARM AND FIRESIDE

Fair Play and Honest Treatment Guaranteed

If you do not win one of the four magnificent touring cars which heads the list of 50 Grand Awards, you will have no one to blame but yourself, for we guarantee that you will receive absolutely fair and impartial treatment. You don't have to invest one penny of your hard-earned money—it costs you absolutely nothing to win one of these grand prizes. We're going to give them away on such a liberal, all-can-win plan, that it will seem more like play than work. This Grand Prize Distribution is given just as much for *your* benefit as anyone else's. Take advantage of it NOW! Get your share of these big rewards. Don't let others get ahead of you. Get started AT ONCE! Sign and mail the coupon to-day—*without fail.*

50 GRAND AWARDS

Also Hundreds of Dollars in Cash Commissions!

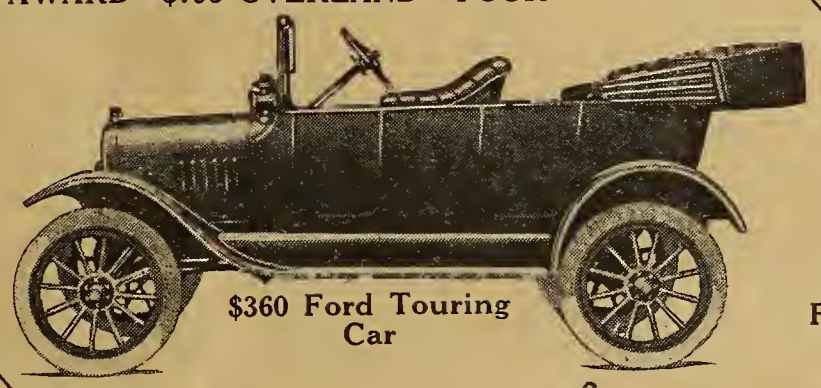


SECOND GRAND AWARD—$795 OVERLAND "FOUR"

Something for Everybody!

There can be no losers in this great, all-can-win Grand Prize Distribution. You are sure to get a Grand Prize or a Cash Commission Check, according to how well you do the small favor that I ask. You don't know what you can do till you try. Why hesitate. Your spare time only is required. Isn't the handsome, big **$1,130 Overland "Light Six" Touring Car** worth your spare time for the next few weeks? Or the $795 Overland "Four"? Or one of the Ford Touring Cars? You see you have FOUR chances to win an automobile. Did you ever hear of a more liberal or remarkable offer? Just a short time ago—on January 12th—I awarded cars to the following persons: A. L. Wolf, Caldwell, Texas; Michael Kleronomos, Athol, Massachusetts; August Kridner, Brookshire, Texas; R. H. Busby, Megargel, Texas. I wish you could read the letters I received from them, telling how easy it was for them, and how surprised they were. I'll send you copies of their letters when you send the coupon. You are no different from others—come in NOW, and win!

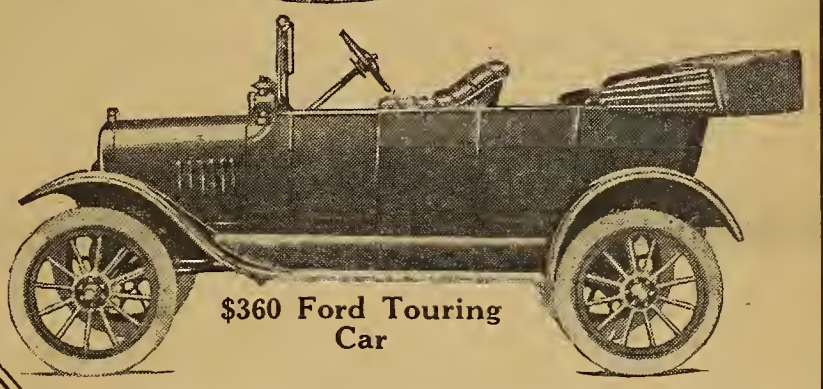
3d GRAND AWARD



$360 Ford Touring Car

All Cars Freight Prepaid

4th GRAND AWARD

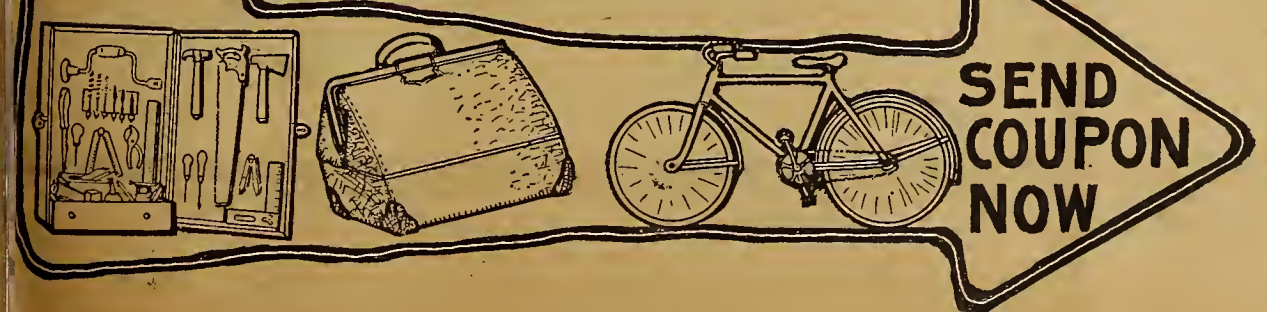


$360 Ford Touring Car

Mail Coupon Quick—Ride in Your Own Car This Season!

The spring and summer months are fast approaching. Your desire for one of these fine touring cars will grow more and more keen as the sun, with ever-increasing warmth, drives old "King Winter" to his lair. When Mother Nature begins to drape the trees and fields in their summer dress of green, then you will want to be out of doors—out where you can enjoy to the utmost the long golden summer days. And when that time comes, are you going to be able to ride in your own handsome touring car or will you have to depend upon the hospitality of your friends for your auto rides? Make up your mind right now that you are going to own your own car. This Grand Prize Distribution offers you your great opportunity. Not one cent of investment is required—just your spare hours for the next few weeks. A little pleasant visiting among your friends and neighbors—that's all. After you have signed and mailed the coupon and have heard from us you will wonder how it is possible to get such valuable gifts for such little effort. Don't turn this page without signing and mailing the coupon below. It alone is worth 5,000 Votes toward the 50 Grand Prizes. You can't help winning with the help we are going to give you. You can't afford to waste another minute—the quicker you mail the coupon the better start you will have. As soon as I receive it I will send you by return mail complete instructions covering the entire contest. There will be time enough then to decide definitely what you want to do—the only thing you should worry about right now is to see that the coupon is properly filled out and on its way to my office. Hurry it along and get a quick start toward winning the handsome Overland Light Six.

T. R. LONG, Contest Mgr.
FARM AND FIRESIDE Springfield, Ohio
Dept. 11



GOOD FOR 5,000 FREE VOTES

T. R. LONG, Dept. 11
Farm and Fireside, Springfield, Ohio

Dear Sir: Please send me by return mail full information regarding your Grand Prize Distribution. This places me under no obligation.

Name .....

Town ..... R.F.D. .....

State ..... Box .....

The Party Line

By Wallace Williams

ACCORDING to our phonograph with the fancy tin horn, a person told Uncle Josh that a certain man whom they both knew had the locomotor ataxia. Whereupon Uncle Josh replied: "Yes, and now that he has got it I'll bet, b'gosh, he can't run it."

I have wanted this page for a long time, and now that I have it, maybe I'll be like Uncle Josh's afflicted friend; but let us hope for the best.

I think I'll call this page "The Party Line." I have lived on country telephone lines all my life, and I never did get to the point where I wouldn't take down the receiver occasionally and get in on what was going on. You can hear anything! That is what makes me like to listen. You think maybe you will hear something important, and it is someone talking about the weather. You hear Murphy's ring. Three longs and a short. You think it is Ira Thompson calling up Nellie Murphy, who is twenty and pretty. He was over a week ago, and he will probably call up for Sunday night. You cautiously approach the telephone and gently, oh, so very gently, ease the receiver off the hook and hold your hand over the mouthpiece. You get set for the news; this is going to be interesting—and the upshot of it all is that the coal-oil man is calling Pa Murphy, who is fifty and grouchy, and wants to know if he couldn't use fifty gallons of oil before the price rises again. You can hear anything on a party line!

A String o' Stories

Ann was drawing a picture of sister's visiting gentleman. She worked very earnestly, stopping every few minutes to compare her work with the original. Finally she shook her head sadly.

"I don't like it much," she said. "'Tisn't much like you. I guess I'll put a tail on it and call it a dog."

"Professor, who is the happier man—he who has a million dollars, or he who has a dozen daughters?"

"He who has a dozen daughters. The millionaire wishes for more, the man with twelve daughters is contented."

"You'll have to pay fare for that child, madam," said the conductor.

"I shall do nothing of the kind! He is only six years old."

"But we collect fares from all children over five."

"Well, why doesn't your old company put their silly rules where people can see them?"

A Scotchman came upon an automobile overturned at a railway crossing. Beside it lay a man all smashed up. "Get a doctor!" he moaned.

"Did the train hit you?" asked the Scotchman.

"Yes, yes. Get a doctor!"

"Has the claim agent been here yet?"

"No. Please get a doctor."

"Move over," said the Scot. "I want to lie down beside you."

"The evening paper says that ten men to one woman die suddenly."

"Well," said the husband, "it simply proves what I have always contended: that you can't hurry a woman."

"Can your husband claim exemption?"

"I don't see how he could be strong enough to fight when he's too weak to shake the rugs."

A gentleman unused to city ways paid his nearest metropolis a visit. As he was about to go across the street a fire engine came racing past, and he drew back on the sidewalk. Then he attempted to cross again, and when he was in the middle of the street the hook and ladder company following the engine knocked him over, bruising him considerably. The crossing policeman picked him up.

Feeling that as the representative of the law he must give a warning and some good advice, he addressed the visitor:

"Now, see here! Haven't you been in towns enough to get out of the way when the fire department is making a run?"

"I did get out of the way of the fire department," replied the injured one. "First, I started to cross, and then I stepped back to let the fire engine pass. I started to cross again when the fire department was past. It was that bunch of drunken painters that hit me."

Plow Dreams

SOME days run so smoothly. We wake up without the alarm or being called. We get up early, and have time to harness and feed before breakfast and maybe pet the cat as he comes stalking down the haymow stairs, stretchy and sleepy-eyed from the night before.

We go over to the house and have a little time to read the paper—something to think about at odd times during the day when everything is going good. Breakfast comes, and the coffee is as smooth as velvet, the eggs are done to a turn, the bacon is just as crispy as we like it, and the toast is as chummy as a smoking tobacco advertisement.

The time takes care of itself. The morning passenger whistles at 7:35 and, looking across the ground we have already turned, we suggest to ourselves, "Say, this is going to be some day to work!" The furrows turn so easily that we drowse off into blissful half-unconsciousness. Our mind wanders. Now we build a wonderful house, or make a vast estate out of the farm. A rich friend dies and leaves us immensely wealthy, and we try to spend the money; but we can't spend the interest on it, he left us so much. We buy a lot of things we always wanted, we give to friends who ought to have more. Perhaps before another round is finished we have refused the nomination for governor, and made a speech to the clamoring throng, telling them we can "best serve the country by following the plow."

And the horses never sweat or fret. The plow follows the team and furrow as naturally as the hand finds the levers at the turns. Its noon before we know it. As we walk across the stretch we have plowed during the morning, and pick up the jug, we can't help reflecting that farming's a pretty good job at that—why it's simply *great* when things are going good!

Like Other People Do

DEAR MAURICE: Evidently you are planning to take a trip, since you ask something about tipping and ordering at hotels. The following will help you. You will understand that there are no hard and fast rules regarding tips.

Tipping, as it is practiced, is simply a form of payment for service rendered. A great deal has been said against it, but this is neither the time nor the place to argue that point. The fact remains that occasionally we are in hotels or on Pullmans or dining cars where tipping is the rule, and we feel that we must do as the others do. What are the proper occasions for tipping? A broad and general rule is to tip whenever some personal service is rendered. The girl who checks our hats expects a tip, as does the bell boy who carries our grip, and the porter who dusts off our baggage and brushes off our clothes as we near the station.

The waiter returns with our change after we have finished our meal, and he expects a tip. Usually the tip given the waiter is ten per cent of the bill. Thus, if our dinner check on the diner is $1.50, we may tip the waiter 15 cents; but tips are seldom less than a dime. W. W.

Very often the menu card has written across the top, "Table d'hôte." The words are French, and pronounced as though they were spelled "tobble dote," and it means that the hotel is the host, or, in other words, an entire meal is served at a certain price. Another French term is used to denote the opposite method of ordering, and it is "à la carte," meaning, order according to the card. Here a person gets only what he orders, paying a listed price for each dish ordered.

Crossed-Line Talk

The falls of Iguassu, in South America, are fifty feet higher than the falls of Niagara.

In Cairo men employed in the native tailoring shops iron clothes with their feet.

The demand for flash-lamp batteries exceeds the output by 300 per cent. The flashlight is part of the soldier's equipment.

A Norwegian has patented a fish hook with the barb at one side of the point, instead of inside.

A New York law insists that every egg placed in cold storage shall be dated. This date must be stamped upon the shell in clear figures.

A 15-inch gun will hurl a shell through a plate or wall of the hardest steel 12 inches thick, seven miles from the muzzle.

The purest example of protein is the albumen in the white of an egg. Protein is found not only in eggs but in all lean meats.

The increase in the membership of all Christian churches in the United States during the past twenty-six years has been 94 per cent, though the population has increased only 64 per cent.

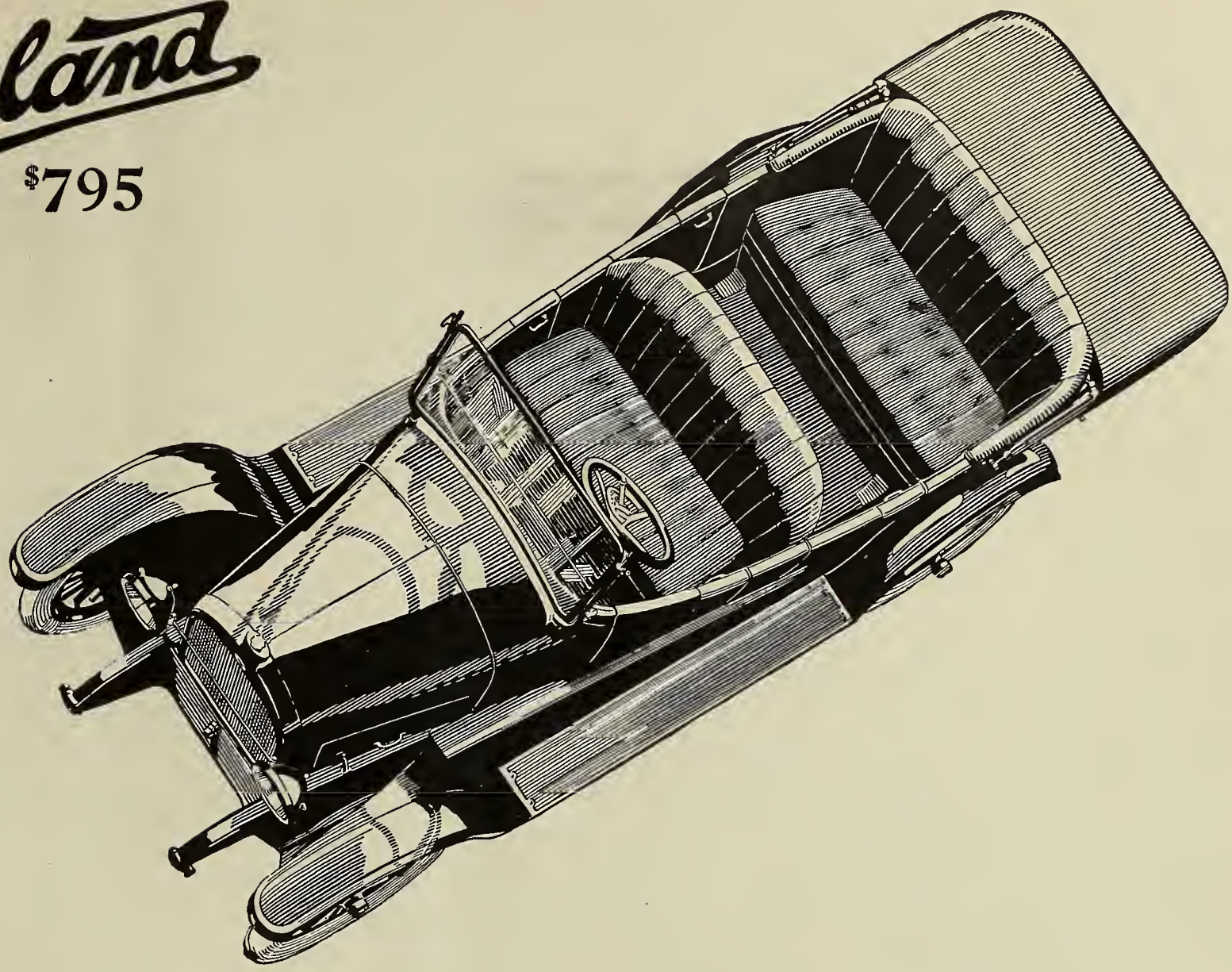
More than one fourth of the active volcanoes of the world are on United States soil. There are about 50 volcanoes in Alaska and the Aleutian Islands. In western United States, in the Philippines, and in the Hawaiian Islands there are nearly as many more. There are but 417 throughout the globe.

The tale of the dog and the doughnuts

Overland

TRADE MARK REG

$795



The Thrift Car

A farmer 30 miles from town with an Overland is closer than one 5 miles away who depends entirely upon horses.

Often a repair is suddenly needed when harvesting—with an Overland it is no trick to go to town, get the repair and return to work without losing precious time.

Sixty percent of all the Overland cars sold are bought by farmers. Why?

Because this thrift car combines in a maximum degree *all* of the five essentials necessary for complete satisfaction.

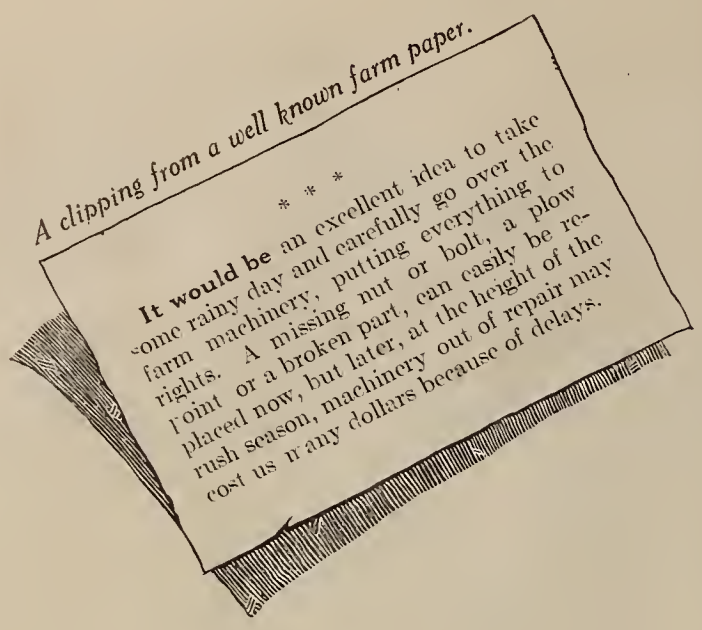
Appearance, Performance,
Comfort, Service and Price

Catalog on request. Address Dept. 1213

Light Four Model 90
$795—f. o. b. Toledo

Willys-Overland Inc., Toledo, Ohio
Willys-Knight and Overland Motor Cars and Light Commercial Cars
Canadian Factory, West Toronto, Canada

Tax Free—Price subject to change without notice



—profitable, too, is the care of the teeth with Colgate's Ribbon Dental Cream.

UNLIKE the machinery on your farm, your teeth get no rest—they work *every* day. Common sense tells you that they need daily care if they are to be kept in good condition. Colgate's Ribbon Dental Cream is easy to use, and you are sure to like both its taste and the good results it brings. It cleans the teeth thoroughly, safely, economically. "Comes out a ribbon—lies flat on the brush" and so may be used conveniently even in the dark.

Sold everywhere or a generous trial size tube for 6c in stamps. Send for interesting booklet—"Bringing up the Teeth."

COLGATE & CO. Dept. 89 199 Fulton Street, New York

Use Colgate's because it does these six things and does them well:

1. Cleans thoroughly without injurious chemicals.
2. Polishes the teeth to natural whiteness without harmful grit.
3. Corrects an acid condition of the mouth.
4. Retards the growth of decay germs.
5. Delights by its delicious flavor.
6. Leaves the mouth clean and wholesome.

APRIL 1918

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FARM AND FIRESIDE

The National Farm Magazine

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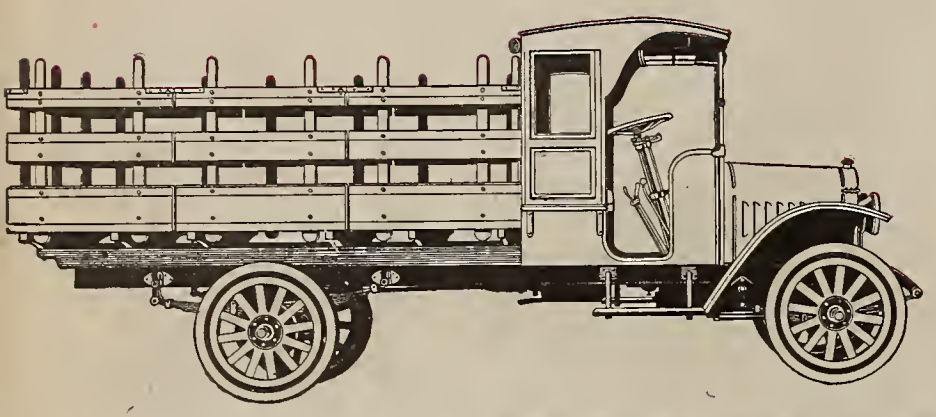
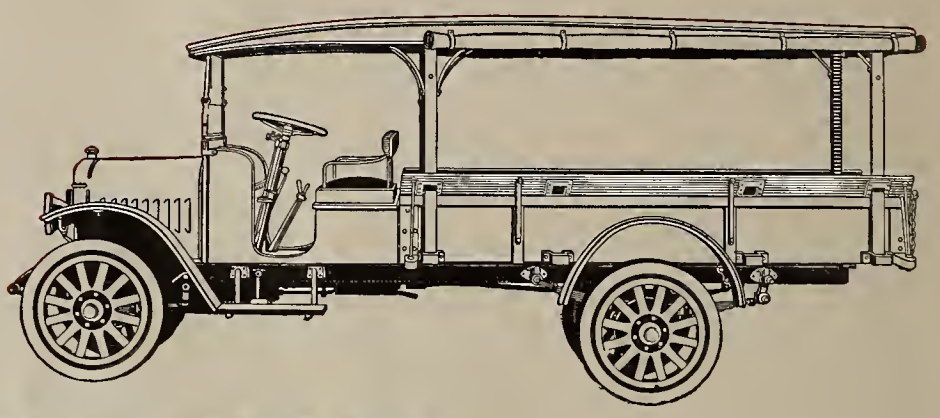
U. S. Department of Agriculture

In this Number

On the Way to Verdun, by R. B. Woolley
"In Steer and Gear and Stack," by Herbert Quick

More Brains than Metal are Used in Building this





MAXWELL TRUCK

This truck costs little more than a first class team, wagon and harness. Costs less when you figure up-keep. Eats only when it works. Requires one-twenty-fifth the care and attention horses do. Travels the 7 or 12 or 16 miles to market, under load, in one-fourth the time.

The farm hand who formerly took all day to drive to mill with a load of grain can now go and return in two hours.

Here is a truck with all the features of $5000 trucks, and sold under the same guarantee. Worm drive. Electric lights and generator. 10-foot loading space. Gas consumption, 16 miles to every gallon. A tire miser. Mechanical trouble practically unknown. Repair bills are too low to mention.

This Maxwell is built for the farm. Weighs 2500 pounds. Goes faster than heavier and more expensive trucks and goes where they daren't follow.

6600 Maxwell trucks are in service. 1100 on farms. Service records show a verdict of 99.6 % perfect based on all the trucks now in use. You'll find no mechanical faults in the Maxwell. A safe investment and a paying one.

You save $400 the day you buy this Maxwell truck, for its price is $1085. And $1085 is $400 less than any other truck of similar capacity on the market.

$1085 Chassis only, f.o.b. Detroit. Electric lights. Electric generator. Worm drive. 10-foot loading space. 2500 pounds. 16 miles on a gallon of gas.

MAXWELL MOTOR COMPANY, DETROIT, MICHIGAN

FARM AND FIRESIDE

The National Farm Magazine

SEVENTY-THREE *persons have written for this issue. Some of their articles may help you to make money, enjoy health, be happy, or while away a few minutes.*

Page 5—On the Way to Verdun — *By R. B. Woolley*
This is the experience of a patriotic young American who enlisted in the American Ambulance Field Service before we entered the war.

Page 6—When I Buy My Next Car — *By Thomas J. Harris*
First, Mr. Harris argued that he didn't need an automobile, and couldn't afford one. Now he tells what he wants in his third car.

Page 7—"In Steer and Gear and Stack" — *By Herbert Quick*
Since the dawn of history the farmer has suffered most from war. This article shows the way to victory.

Page 8—The Little Country Theater — *By Ruth M. Boyle*
Herein is proved that home-talent plays and entertainments bring out latent abilities which have lain hidden and unsuspected.

Page 10—Trucks and Trailers — *By Walter Hendricks*
Motor trucks will shorten the farm-to-market trips, and thus help solve our serious transportation problem.

Page 12—The Confession of a Timber Buyer — *By John Calderhead*
A mighty interesting expose of what farmers with timber had to fight before federal and state agencies came to their aid.

Page 16—Maple Sugar in the Making — *By James Lampman*
This article makes a sugar camp seem so real that you can almost smell the golden maple syrup and sugar.

Page 18—More Tire Mileage — *By W. V. Relma*
Improper treatment sends many tires to the junk pile long before their days of usefulness should have been finished.

Page 21—Painting Our Car — *By L. J. Jennings*
It may seem like a big job at first, but it isn't. You can paint your car in a short time and at small expense.

Page 28—The Workhorse's Ration — *By Dr. John Benson*
The amount of feed a workhorse should receive, when he should be watered, what part of the ration should be hay, are questions answered by Dr. Benson.

Page 30—Saving Money on Feed — *By Arthur N. Wilcox*
Can farmers save money on dairy feeds? Mr. Wilcox tells the way Wisconsin dairymen are accomplishing this very thing.

Page 33—Prune; Don't Cut and Slash — *By B. F. W. Thorpe*
Many orchards receive a wholesale cutting and slashing of their tree tops instead of an intelligent pruning.

Page 36—Thunder Doesn't Spoil Hatches — *By S. O. Bryant*
Success in hatching chickens depends on the fertility of the eggs and the care and attention given them during incubation.

Page 40—Your Child's Own Room — *By Mrs. Emily H. West*
In Mrs. West's family they have always believed that each child should have a place in the house that belonged to him alone.

Page 41—Good-Health Talks — *By Dr. David E. Spahr*
The Run-Down Boy, Infants' Teeth, The Milk Diet, Bunions, and Care of Nose and Mouth are subjects Dr. Spahr discusses this month.

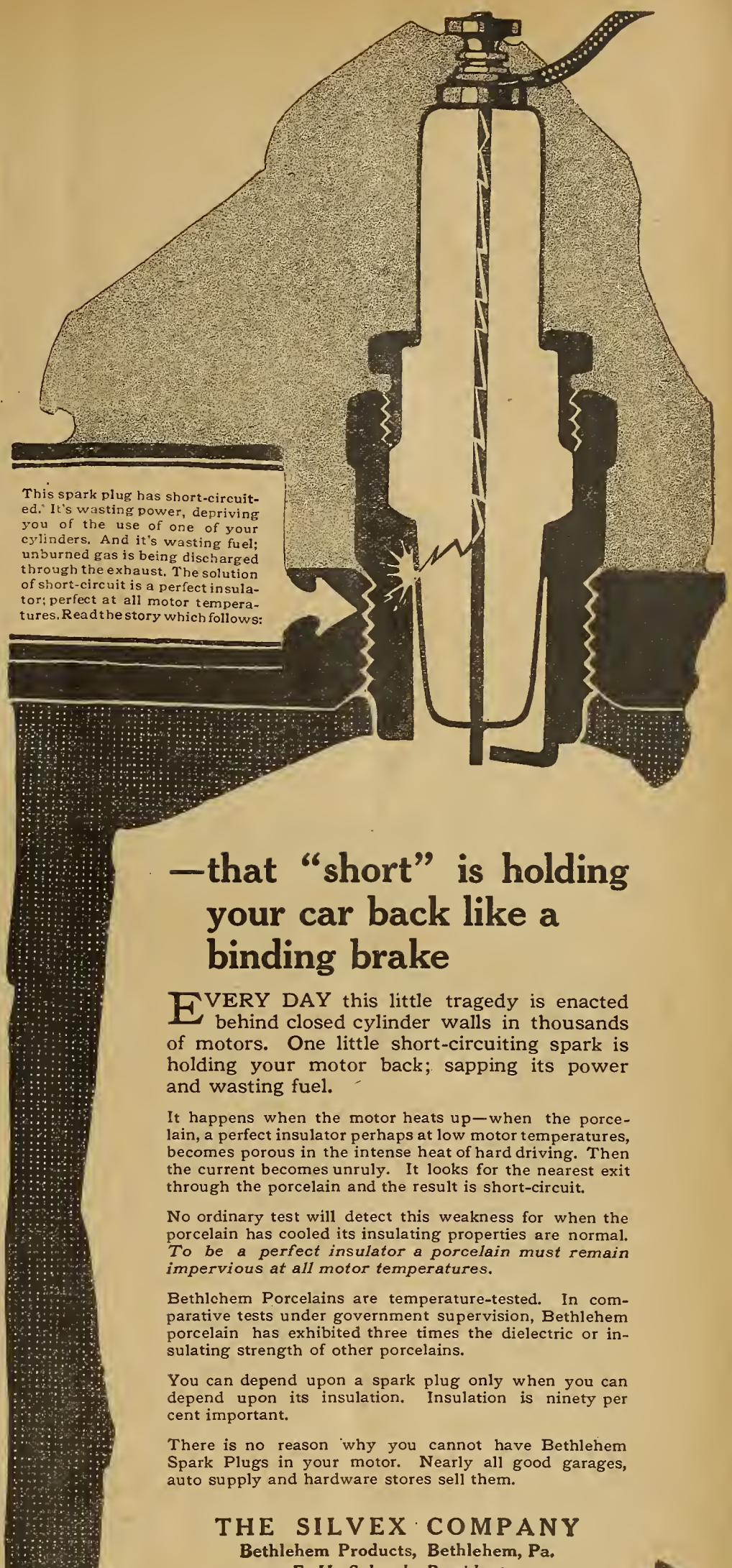
Page 42—Keeps Household Accounts — *By Jane Macpherson*
The high cost of living was responsible for the installation of the system. It is possible to tell to the penny what your monthly expenses are.

Page 43—Rings Learns Caution — *By F. E. Brimmer*
Mr. Brimmer relates another interesting experience of Rings Raccoon in which he disobeys his parents and gets a good spanking.

Page 44—Looking Your Best — *By Margaret Drummond*
Miss Drummond explains a system by which you can decrease your weight if you are too fat.

Our May Number

A few of the many interesting articles in the next issue: Swapping Germans for Canadians, by Private Rossiter; More Corn from Fewer Acres, by A. T. Morison; Our Farm's "Come-Back," by Hilda Richmond; Smokes for the Trenches, by Frank Ziegler; The Lure of a Kitchen Garden, by W. L. Nelson; What's the Future for a Dairyman? by Carlton Fisher; A Black Cat for Luck, by M. B. Howard; The American Red Cross in War-Scarred Europe, by John Coleman; and a double page of pictures, entitled "The Enemy."



—that "short" is holding your car back like a binding brake

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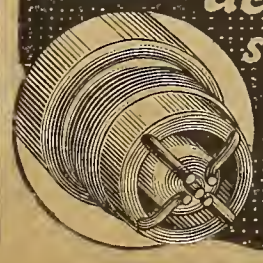

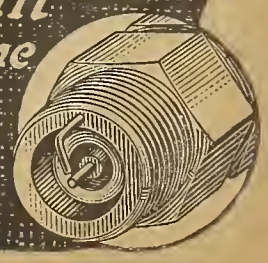

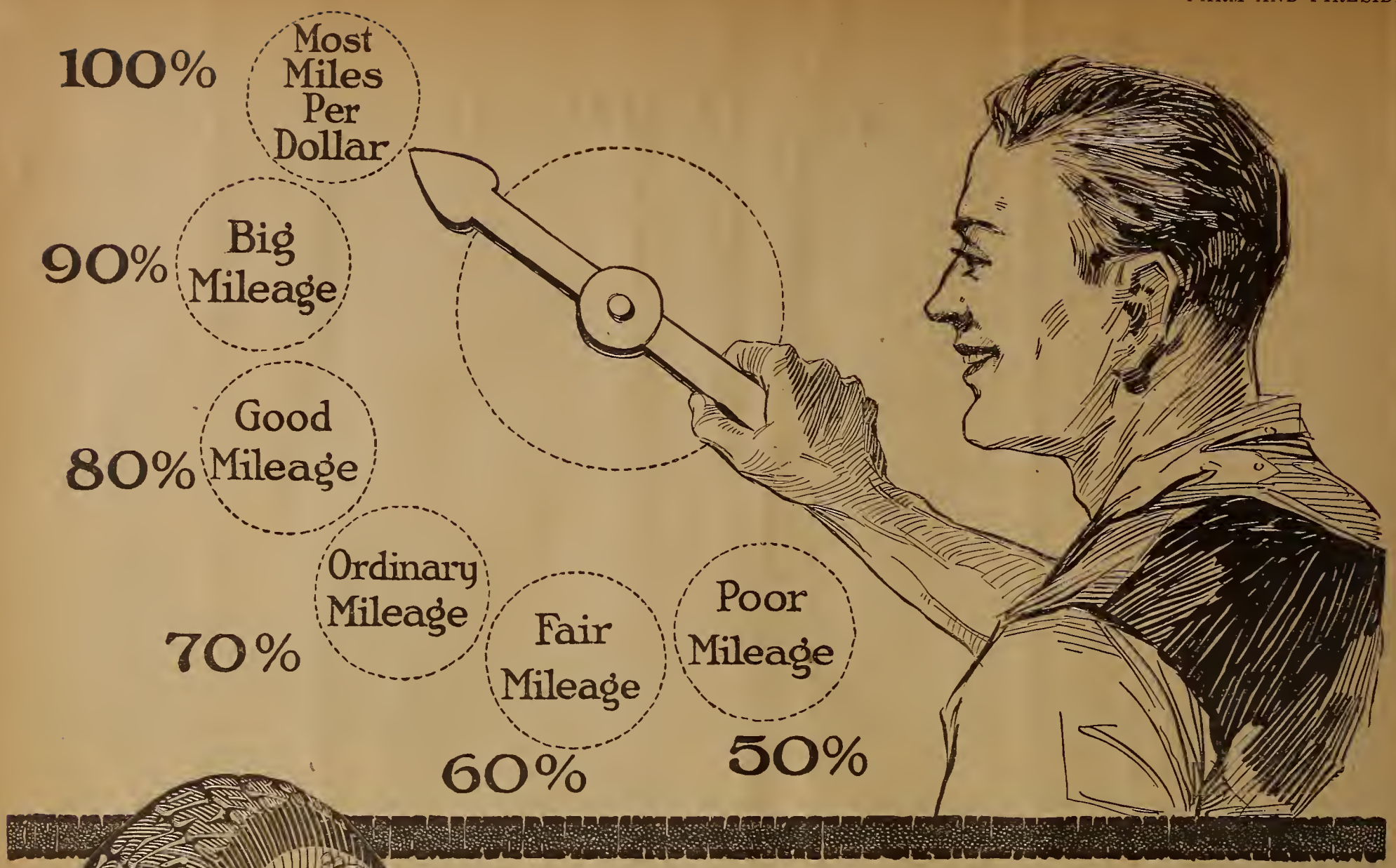

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On the Way to Verdun

By R. B. Woolley

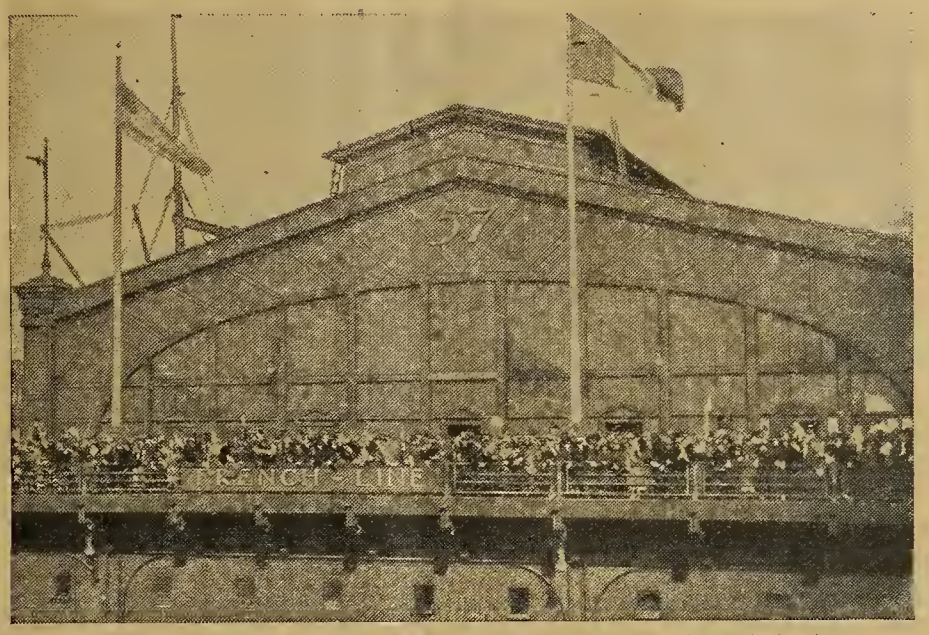
Formerly with the American Ambulance Field Service

GETTING into the American Ambulance Field Service was no easy task. Down there in conservative Boston, where I signed up, they worked on the theory that every applicant was a potential spy until he proved himself otherwise. It took "six good men and true" to convince the heads of the Service that, like a certain brand of soap, I was 99 per cent pure pro-Ally. My past life, with that of my father and mother, and their fathers and mothers, and so on, down the genealogical list, was raked with a fine-toothed comb.

But a doctor, a preacher, a lawyer, and the heads of several clubs and civic organizations in my home town managed to paint my character and my patriotism in such manner that my discrepancies and deficiencies were camouflaged, and I reported for orders a happy young man. When I inquired of Mr. Sleeper, the chief of our Service in Boston, why such a painstaking shaking of the family tree and a search of the family closets for possible "skeletons," he told me this peculiar tale of German deviltry:

"As civilians are always more or less under suspicion, the shrewd German Secret Service tries to plant its men in various organizations which are a part of the field-fighting forces. The American Ambulance Field Service offers fertile ground. In spite of our watchfulness men of questionable character have got into France, there to work their will. So the French Government said to us: 'Show convincing proof of the loyalty of every man you send over; prove to us that they are not only native-born Americans, but strongly pro-Ally as well.'

"Since we increased the number of letters a man must show before we would permit him to have a passport from three to six, it has made it more difficult for the enemy to slip men through, and the Germans have been compelled to adopt a different plan. So now, young man, when you get to France, the local police at Paris may get a mysterious note to the effect that you, R. B. Woolley, an American, enlisted in the American Ambulance Field Service, are in reality a spy in the paid employ of the German Secret Service, and as such should be summarily dealt with."



Friends and relatives bidding us good-by as the ships left the pier

It was almost beyond my belief that they should take such steps to prevent our boys from doing a purely humanitarian work, for of course none of our ambulance drivers were armed or even classed as belligerents.

Before our section left Paris there was precious little of our past lives and actions while in France, that wasn't an open book to the *prefecture de police*. Many of the fellows were so "kidded" into being frightened over this spy question that they were afraid to leave headquarters for fear of being arrested and thrown into the *bastile* as a German agent. I didn't rest very easy myself until I had my uniform, had gone through the cross examinations by the local district police at Passey, and had received my wallet-ful of papers, of all shapes, sizes, and descriptions, most of which had my sad-looking photograph pasted conspicuously upon the front leaf.

You may be sure that during our stay in France we never wandered far without our mess of credentials. The only time I ever needed them in Paris was when I was stopped as I was about to photograph the Trocadero and the Eiffel Tower. Then a smart-looking *gendarme* with many a polite bow and violent shrugging of the shoulders inquired of me my passports and my permission "to photographs take." My formidable-looking passport, together with the twenty or thirty other documents, did the trick; but just the same he didn't let me take the picture. I was glad enough to get away without being haled before the *prefecture*.

Just why they are so blamed fussy about photographing these well-known Parisian landmarks beats me, when you can buy post cards of the scenes at any bookstore or stall in the city. I later learned, however, that the two structures are in some way used in connection with the great French wireless system.

The *maison*, or house, in which we were quartered in Paris was the property of a well-known countess. She turned over a few rooms to the Service when it was first founded; then she gave the beautiful garden in the rear, which was used as a sort of out-of-door garage. Other portions of the splendid old building were presented as the organization grew, until there was left just a little corner for her to live in. Very few of the boys ever saw her, but many of us did see a sweet-looking lady walking on the little paths under the lilacs, leading a little girl. We understood she was the countess, but of course none thought of approaching any woman in that place without going through the necessary formalities of an introduction.

The second and third floors of the *maison* contained the offices. We used to hang around here, waiting for the bulletins to be posted, hoping against hope that we would see our name listed among those slated to go out with the next section. The building itself, like most French houses of the better class, was built around a small areaway, in which was a bit of a garden. On one side of this court was the kitchen; on the other was the dormitory, shower-room, and reception hall.

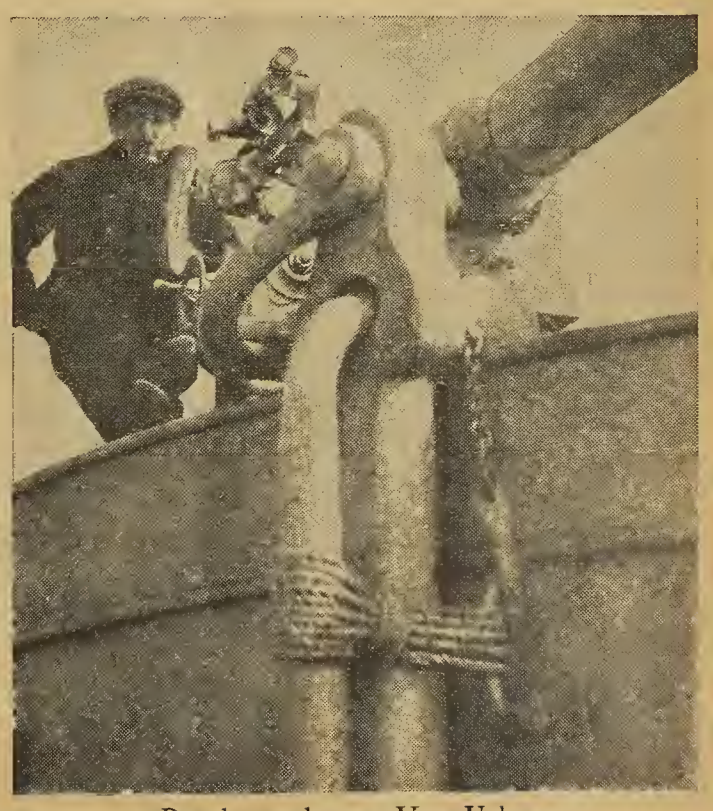
Meals were served the boys at two long tables, minus table cloths, in a splendidly paneled dining-room, from which the tall French windows opened right out upon the terrace. It is said that Benjamin Franklin once dined in that room. I have seen the record that he was a guest of the owner upon the occasion of his memorable visit to France.

It would be thought that with so many young men, most of them good red-blooded Americans, fresh from home and school, there would be a superabundance of gayety. But such was not the case. On the contrary, there seemed to be an undercurrent of deep realization of the grave days in which we lived. This was augmented by the fellows who were back from the front for a few days. Invariably these men bore the stamp of the man who has quaffed of life's cup to the full.

The minute a chap entered the room I could tell whether he was a newcomer or someone returned from the danger zone, without glancing at anything except his face. As a friend told me before I left home, no matter how old, or how young, or how sad, or how gay you are when you go out to do your bit in this Service, you return a changed person.

We were never far from the shadow of war. Always you could see the black of sober mourning in the women's dresses; the remnants of men hobbling about the streets or sitting pathetically on the benches under the trees, some gazing out with eyes that saw not, while they seemed [CONTINUED ON PAGE 15]

In Paris—just before going to Verdun



Ready to shoot a Hun U-boat

The farmer who owns a car lives close to town

Automobiles prove their utility at threshing time

When I Buy My Next Car

By Thomas J. Harris

WHEN I bought my first car I went through the stages that every prospective owner experiences. At first I argued that I did not have any use for an automobile, and that I could not afford one if I did have use for it, and then these misgivings gave way to curiosity, interest, and desire.

One day an acquaintance told me about a big car. It was an old-timer, but rather good-looking, and had sold in the $2,500 class when it was new; and, furthermore, the owner wanted to sell. After much bargaining I bought it. I knew when I bought it that it would need a little attention at the garage. There was a cylinder that was not firing all the time, but that I knew was the fault of the magneto, and with some repairing it could be made to run like new. However, I found out at high cost that it never would run like new. There were only two good tires on it when I bought it, but I scarcely expected everything to be first-class in buying a $2,500 car for $300, and that was all that I paid for it.

I soon began buying little things for it: Now a tire, then a set of spark plugs, the brake linings needed replacing, and the water pump needed new gaskets. The valves didn't fit just like they should, and I had them ground and the carbon removed. It was one of the old models that started on dry cells and then shifted to the magneto, and every other week, it seemed like, I bought a new set of dry cells. I was having a lot of fun with it, but it devoured enormous quantities of gasoline.

I found later that the car had had hard, abusive service in its day, and that many of the parts were strained and the cheap driving was gone out of it. I had bought a lot of grief. I thought I would wait and trade it to someone. I started out to sell it for $500, but finally I traded it for a mortgage on a little piece of land. I never had seen the land—it may be worthless. The mortgage is foreclosed, but I made a good deal, for I got rid of a bill of expense.

Immediately after selling my second-hand machine I began to look around for a new car. I listened to the agents of a dozen different ones. Some of them had secret features that no one else had, some of them made extravagant claims of what they were going to do, some agents would keep their cars in repair for a certain length of time, and most of them carried a nice long-handled hammer for the other fellow. His gears would strip, the springs were no account, the differential was wrong, the motor was too large and wasteful or overrated and wouldn't pull the car. In a maze of information and misinformation I tried to consider everything — looks, motor, and the life expectancy of the whole job, and at last I bought.

The car of my choice had some good records to its credit and, what is more, it had a good record in the hands of the people whom I knew were driving it. It was low-priced, for I could not afford a high-priced one. It had a nice instrument board and all the refinements that seemed a company could afford to put on a car for the price at which they were selling.

I have never regretted buying it. It was bought as a necessary part of the farm equipment. I believe cars for farmers are a necessity. I do not see how they can manage to get along without them, and I heard my banker say that he would consider the purchase of a car a legitimate investment. We work our machine just the same as we do our horses. We run errands with it. We make trips out to our big pasture in the south part of our county, twenty miles away, to see about stock, in one fourth the time that we would use if we went in a buggy or on a horse.

A Most Useful Piece of Machinery

IT'S the busiest and most useful thing on the farm at silo-filling and threshing time. To the farmer living some distance from town it saves him a half day's travel. I know a farmer who operates two farms which are six miles apart, and he lives at the home place all the time. When he and his men are ready to work the other farm, they move up the tools and horses and leave them until the job is finished, but they drive to work of a morning and back at night in the automobile. The automobile to the farmer is not a pleasure car. It is a highly indispensable piece of machinery that one may enjoy at odd hours. But because it may be taken out for a joy-ride it does not lose its title to a part of the farm labor-saving equipment any more than the horse that we used to work all week and drive on Sunday.

That second car is an old one now. It has not broken any records, but it has given me good service. I get about 18 miles on a gallon of gasoline, and average 5,000 miles on a set of tires. As long as a person does that consistently he has no room for complaint. He should not expect to travel as cheaply in an automobile across the country as he can in trains.

We went a whole lot more when the car came. The whole family enjoyed it, and it made a lot of difference in the way we lived. For one thing we dressed better. I noticed that the women-folk began to buy motor veils while I went in the direction of long-cuffed gloves. That was the first step. Then we were going more to places, and it seemed natural at the time that our clothes seemed a little rusty. I am not sorry, either; for well-dressed persons are more contented than persons whose clothes are shabby. Then it seemed that we began to hold more family consultations; chiefly they were about going places. The boys who had not gone with the family since we drove the old jump-seated buggy began to get ready to go, provided of course they were not planning to go out on calls where the other members were not welcome.

The boys learned about the mechanical parts of the car faster than I did, but I tried to keep up with them, and I learned to make many adustments—little trifles that cost money when a garage mechanic charges up his time to you. For instance, it is not difficult for a car owner to keep the contact points clean in the make-and-break box, and it gives life to your engine. You will find that, while it never pays to tinker with a motor, it is false economy to stand by and let a mechanic do something that you can do. There is no reason why you should not be able to take the carburetor off the car if it becomes filled with dirt. What one man can do, another can do too. A car owner can keep the brakes working free, and the bands in good order. There are drivers who grind their own valves, but that is a job that I have always considered within the realms of the expert. The valves have to set so perfectly that I never could quite arouse enough courage to grind them on my car, although I have been reasonably successful in grinding them on our farm engines.

Whatever your ability may be along mechanical lines, you can keep the car looking good. All that is required is a chamois skin and clean water, or there are polishes that may be bought and rubbed or sprayed on the body to make it shiny.

Most all cars have storage batteries now. They did not have them when I bought my first one, but my present one has electric lights and starter. A little judgment will dodge some battery bills. There are two essentials that you must observe. Keep plenty of distilled water over the plates in the jars, and keep the battery fully charged. If you have a direct current of electricity in your house—and most of the plants for country homes are of that type—it is an easy matter to rig up a charging board and put "juice" in them from outside sources. Automobile batteries have about the shortest life of any part of the car, and all care should be taken of them.

But about the car's effect on the family. We began to take a new interest in people and places. I joined the Grange and went to the

[CONTINUED ON PAGE 11]

If women understand the car's "works" they get more service out of it

"In Steer and Gear and Stack"

By Herbert Quick

THE farmer everywhere loves peace. The American farmer especially loves peace. Since the dawn of history the farmer has been the man who suffered most from war. All that he possesses lies out of doors in plain sight, and is spoil of war—his house, his grain, his live stock. He knows that he pays the price of war "in steer and gear and stack," and that the flames that light the skies in the rear of every invading army are consuming the things that yesterday represented his life-work and the life-labors of past generations of farmers.

But the farmer everywhere is a warrior when war is the only thing which will make and keep him free—either a warrior or a serf. He cannot rally to the colors as quickly as can the dwellers in the cities, because it takes longer to send to the farms than to the cities the fiery cross of the call to arms.

It takes longer to call the farmers from the fields than the city dwellers from the shops; for many do not hear the first blast of the trumpet, and others do not at first understand its meaning because they have not had the time to talk the matter over with their acquaintances on the street corners, in the stores, on the cars, in the clubs, and at other gatherings, or to read half a dozen extras a day. The farmer must have more time, in a sudden emergency, to make up his mind.

It is impossible to set the farmers of the United States on fire by means of any sudden spark or rumor, or to blow a chance catch of flame among them into a conflagration with any hand bellows of artificial agitation; but when the farmers do ignite, they burn with a slow, hot fire which nothing can put out. They are sometimes the last to heat up, but they stay hot; and in a long fight they are always found sturdily carrying the battle across No Man's Land to the foe, in the last grim struggle. They fight the slow rear-guard action that covers retreat in disaster, and their stubborn valor always helps to turn the tide toward victory in the final triumph. The American farmer will give all that he has and all that he is to win this great war against war, this enormous struggle to win again the victory which we fondly believed we had twice won in the past.

This war was at first hard to understand. No armed foe invaded the United States. The night skies were not reddened by the burning byres and farmsteads of America. No raiding parties harried us of our cattle or horses. No saber rattlers insulted our women. It seemed to many of us that we were not at war, the thing was so far off, and it came to us in so unfamiliar a guise.

Photograph by Central News Photo Service, N. Y.

A company of our troops lined up for inspection in a French village where they are billeted

We did not then realize what a giant war has become. We did not then know that a monster has arisen with a thousand arms, who could reach across the seas, and could take from us three fourths of everything we grew without our being aware of it, and could follow up his robbery with invasion, subjugation, and national death. We did not at first realize this, but finally we saw that it was so.

If the Imperial German Government had made and enforced an order that no American farmer should leave his own land, that he could not haul a load of grain or drive a head of stock to town—if, in fact, the Kaiser had laid an interdict on all intercourse between farm and farm and between farm and town, he would have done only a little more than he accomplished by his interdict against American farmers' use of the sea. What was the order against which we rebelled when we went into this war? Look at the condition of the American farmer in the latter part of 1914 and the first half of 1915, and see.

When the war broke out, through terror and surprise and panic we gave up for a while the use of the sea as a highway. To a great extent we gave it up. And so long as we gave it up, we, the farmers of America, were ruined. I know an Iowa farmer who sold his 1914 crop of 25,000 bushels of wheat for seventy cents a bushel. Farmers in the South sold their cotton for half the cost of producing it, and were facing ruin.

All this time those portions of the world whose ports were open were ready to pay almost any price for our products; and when we finally rallied and set once more in motion the ships of the world, prosperity returned to the farms of America. But prosperity never returned to the farmers of those nations which remained cut off from the seas.

Take the case of Australia, for instance. There three crops have remained unsold on the farms. There were no ships which could be spared to make the long voyage to Australia; and so, in spite of the efforts of the Government to save the farmers from ruin, grain has rotted in the open because there was no place in which to store it, and millions of tons have been spoiled by mice and other rodents.

Such conditions spell irretrievable disaster, in spite of all any Government can do. Such conditions would have prevailed in this country, from the outbreak of the war until now, gradually growing worse and worse, and deepening in disaster from hard times to universal stagnation and wide-spread famine, if our Government had not first resisted with every diplomatic weapon the encroachment of the German Government, and finally, when its cruel, piratical, and ruthless policy moved on from illegal restrictions to open and ruthless murder—if our Government had not drawn the sword.

Why did we draw the sword? Was it to keep up the price of wheat and cotton, and to protect trade only? If someone should order you to remain on your farm, and not to use the public highways, would your resistance be based only on the fear of loss in property, the profits from failure to market your crops, the inconvenience in not being able to buy your supplies in town? By no means! You would fight to the last gasp, not to make money, but to be free.

When a man is enslaved, all he loses in money is his wages; but the white man has never been able to accept slavery for that reason. The white man has never yet been successfully enslaved. There rises up in him against servitude a resentment so terrible at the loss of his ownership of himself that death has always been preferable to slavery.

What the Imperial German Government offered the farmers of America in its ruthless submarine warfare was not the loss of profits, but slavery to the saber rattler of Potsdam. He purposed to make us slaves by murdering the people who take our products to market. By all the laws of civilized warfare commerce under a neutral flag was free from any hindrance except the legal interferences justified by war; but the Germans not only stopped merchant vessels, but sunk them. They not only sunk them, but they sunk them without warning.

They not only sunk them without warning, but they sunk them without trace—the most devilish thing war has seen since the savages scalped our ancestors and threw screaming babies into the flames of burning cabins; for the German plan of sinking merchant vessels without trace is based on the murderer's maxim that dead men tell no tales; and it was executed by the massacre of men, women, and children who, having committed themselves to the awful dangers of small boats in the open sea after their ships were torpedoed, were then mercilessly raked with gunfire, and exterminated to the last poor wretch.

These are the murders that stain the hands of the Kaiser and his advisers and minions. These outrages were perpetrated on neutral vessels, when all that civilized warfare gave the Germans a right to do even with the merchant vessel under a hostile flag was to stop it at sea and, under proper circumstances, make it a prize of war; but to kill the civilians on board even under a hostile flag was nothing but stark, plain, unmitigated murder.

And these murders were committed in order that we might be enslaved. Having the right, according to the laws of war, to take the sea with his fleet, and fight the thing out, gun to gun, but being afraid to do so for fear that he might lose his fleet, being afraid or unable to stop the selling of our products to his enemies or to open his own ports to us by fair means, he declared that he would do it by the foulest methods ever resorted to in war. He declared the sea closed, and that he would keep it closed, not by war, but by murder.

To have submitted would have cost us dear in prosperity; but that would have been the least of our loss. We should have had to grovel before the German Government. We should have had to accept murder as a thing against which we could not defend ourselves.

We should have allowed this new horror to become a part of all future wars, and have been responsible for its incorporation into international law. We should have proved that because the fire which burns up our farms' usefulness is beyond the horizon we will submit to the kindling of it. We might have accepted the seventy cents or less for wheat, the six cents for cotton, and the like in case of misfortune; but we could not do it merely because we were commanded to do it.

By so doing we should have accepted degradation. We should have accepted at the behest of a half-crazed autocrat in Europe a lower standard of living in America. We should have given up at his command the hope for our children's education, the payment of the mortgage, the better school, the new church, that whole scheme of better rural life which is based on freedom to produce and freedom to market what we produce.

We should have begun, after winning our freedom in our own revolution, after establishing a union on the foundation of liberty in the blood and tears of our war between the States, after wresting these States from the wilderness, after gaining religious freedom, and freedom of speech and of the press—after all these victories won by a people gathered from every nation of Europe in the name of freedom, we should have begun to knuckle under to autocracy. We should have basely yielded up our birthright as Americans.

Such a thought is intolerable, when we come to understand it. Peace at such a price would not be peace, but only a preparation for a future revolt against subjugation. Better any sort of war, better war forever, than that. Let us remember little Holland, which fought the great empire of Spain for eighty years and finally won her liberty.

This then is the war in which we are fighting. Whenever the time comes for new sacrifices, let us remember that we fight for liberty. Not only for the liberty of the Belgians, the French, the Servians, the Russians, the British, the Montenegrins, the Roumanians, the Italians, but of all nations, even for the German people themselves, and most of all for our own liberties. Not for our own liberties to-morrow, or next year, or twenty years from now, but for our freedom to-day. Not for the right to live in the future, but for the right to make a living this year.

German oppression had begun to pinch us before we entered the war. If we had not declared war, but had accepted the conditions of life ordered for us by the Kaiser, we should to-day be a poverty-stricken people, our factories shut down, our workmen unemployed, our people starving, our farmers ruined by the poverty of those for whose consumption we grew our crops. There is loss and sacrifice in the war, but there would have been far more of loss and sacrifice in accepting the German terms. We should have lost more in money than we have spent in the war, but we should have lost something far more precious: we should have lost our souls.

[CONTINUED ON PAGE 17]

The Little Country Theater

By Ruth M. Boyle

"WHY, 'Back to the Farm' has 'The Birth of a Nation' beat a mile." It was a North Dakota farmer who told me that.

"The Little Country Theater idea is the biggest thing that has happened in rural sociological development for twenty-five years." It doesn't take more than two guesses to tell that a college professor said *that*.

So the first opportunity I had I was on my way to North Dakota to talk to this man, A. G. Arvold, who was running heavy competition to the movies among the farmers, and at the same time was making the college faculties sit up and look.

I found him at the College of Agriculture in Fargo. He was sitting at his desk, poring over a map of the State. The circles on the map represented the communities where plays had been given that year by the farmers themselves or by the Little Country Players.

"All I wanted to do was to help people find themselves. And the idea of plays and entertainments got up by the people for themselves seemed to me the best way to do it," said Mr. Arvold. And then, because he can't talk long without talking about North Dakota, which is his second great enthusiasm, he went on:

"This is a wonderful State. For one thing, it has a rigorous climate—remember the North Dakota blizzards—and that always develops a strong and vigorous people. It is a rural State. Over 150 towns have a population of less than 500 inhabitants. The twenty-five nationalities represented come from the best blood in Europe. Some States might think themselves unfortunate to have so much foreign blood—Norwegians, Russians, Germans, Canadians, Scotchmen, Irishmen, Icelanders, Swedes, Danes, Englishmen, Greeks, Turks, and Italians.

"But remember all of these people come originally from countries whose civilization is much older than our own. They have a poetry, a drama, an art in their previous national existence which, if brought to light under the great new American environment, would bring to North Dakota a rural civilization such as has never been heard of in the history of the world."

Mr. Arvold found that the people of his State were like people in any other State. They are hungry for entertainment, for recreation. They want something interesting to do. They want some place to go. Thousands of them have found, or are finding, what they craved in the ideas for self-amusement that come to them from the Little Country Theater.

The theater itself isn't pretentious. It is simply a dingy old chapel at the College of Agriculture remodeled. It is just about the size of the average small town hall; the decorations in green and gold are very simple; there is a stage with a plain green curtain. Hundreds of old halls, garrets, basements, and schoolhouses throughout the rural districts might be turned into just such a little country theater at small expense.

Over the theater in the old garret are the coffee tower and the hayloft. In the tower the entertainers and their friends have refreshments after a program; the hayloft serves as dressing-room, rehearsal-room, banquet hall, or community exhibit-room.

The object of the Little Country Theater is to produce plays and community programs that can be easily staged in the country school or in the basement of the church, in the town hall, or even in the sitting-room of a farm home. The young people who come to study agriculture and home economics at the College of Agriculture attend Mr. Arvold's classes in "public speaking," as it is called in the college catalogue. But, instead of teaching them merely how to recite or debate, he has each one manage and put on a program. It may be a play or a festival program, or it may be a demonstration of new methods in cooking or in agriculture.

The young people who take part in these plays and programs have caught the spirit, and they have gone back to their widely separated communities and carried the idea with them. Sometimes they produce widely popular plays like "The Servant in the House," and often the plays are original.

Farmers wrote and staged the play centering around this country store

The dance of "Black Rust and Wheat" is an original dance evolved at the Little Country Theater, and was given before crowded audiences in many different North Dakota communities. They could easily understand its symbolism, because they raise wheat and they know the effect of black rust. Wheat was a blond girl dressed in golden yellow, Science was a young girl in white, and Black Rust appeared in ugly black, with his face made up to represent death. Black Rust pursued and threatened Wheat; Science came and drove Black Rust away, so that Wheat triumphed.

Talent Springs from the Soil

"BACK to the Farm" was a play written by a student at the Minnesota Agricultural College, and given for three successive evenings during the convention of the Tri-State Grain Growers' Association held in Fargo. Hundreds were turned away from the theater. The play was written by an amateur and presented by amateur actors, but it took hold because it was genuine. Writing and acting, it came straight from the soil.

One day two young Icelanders came to Mr. Arvold's office to talk to him about a play they were writing. They called it "The Raindrops" because the story was based on an old Icelandic legend about the raindrops. They were having great difficulty because they had no scenery to go with the play, and they wanted to have a background like the old country where the scene was laid.

"Go to the armory and see if you can't find some canvas and paint your own scenery," said Mr. Arvold.

The boys were astonished. They had never painted anything more pretentious than a barn in their lives. But they had got used to thinking they could do anything Mr. Arvold thought they could, and they did. They painted their own scenes, the mountain backgrounds of Iceland, a cabin the exact reproduction of an Icelandic home.

"I could look out of the window every morning when I woke up and see that waterfall on the mountain," said one of the young men when he was complimented on the wonderful naturalness of the scenery.

The play is remarkable too. It is based on the legend of the two raindrops, one of which had rushed on swiftly in search of adventure until it reached the ocean and had accomplished nothing. The other had lingered and had watered the growing grain in the fields. In the story one of two brothers goes to America; the other remains to cultivate the farm at home. The wanderer returns, and falls in love with a girl whom his brother also loves. The great moment of the play comes when the wanderer finds that the girl has given her heart to the brother who remained at home, doing the humble duties that fell to his lot. He joins their hands and tells them he is going back to America.

"Every Ship Will Find a Harbor" is a three-act play written by a young North Dakota farmer. The action of the play took place in a country store, a woods, and in the sitting-room of a farm home. The play told of a lazy country boy who decided to leave the farm and go west in search of adventure. He wanted to study machinery with the aid of a correspondence course because he didn't like going to school. While in the employ of a Western power company his arm was broken. Disabled, he became interested for the first time in the community where he was born.

He lead the farmers in co-operative enterprises, and taught them to live a better social life and work and plan together. The play was a popular one.

A young man who had witnessed several of the productions in the Little Country Theater at Fargo went back to his community determined to start home talent entertainments there. He interested his neighbors, and they staged a home talent play in an empty hayloft.

The stage was made of barn-floor planks, the draw curtain was of binder cloth, and ten barn lanterns hung on fence wire furnished the border lights. Branches of trees were used as a background, and planks resting on old boxes and sawhorses were used as seats. A talking machine was the orchestra. The play was a huge success.

The best thing about home talent plays and entertainments is that they bring out all kinds of latent abilities which have lain hidden and unsuspected. The daily routine of the farm and the farmhouse does not furnish opportunities for discovering talent for music, painting, drama, or writing, and yet if these talents are discovered and exercised they bring limitless happiness to the person who has them. When the young people on the farm are lonely and dissatisfied, it is because they want to do something different. They feel that they are capable of something bigger than the round of duties which have become mechanical to them. If they can take part in a pageant or play, and find they can move people—make them laugh and cry—the loneliness and dissatisfaction cease.

"A social vision must be discovered that will keep the great men, who are usually country-born, in the country. The country people themselves must work out their own civilization," says Mr. Arvold.

Through giving their own plays in their own theaters, country people not only come to a greater appreciation of good drama, but they also become interested in each other. When that happens the city loses its pull on the young people of that community.

These young girls planned and made their own costumes for this pretty folk dance

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Trucks and Trailers

By Walter Hendricks

IF YOU will remember some years back you will recall the story of how the German army adopted its present methods of mobilization. The Kaiser thought his army system was perfect until he happened to see an American circus unloading from its train and transporting its baggage to the circus lot. The Kaiser admitted that they did it better than his armies, and immediately he ordered his officers to copy from the circus.

Now, the point of the story is this: that to-day, with its magnificent horses, the modern circus, as well as the modern army, also uses trucks and trailers. Thus the most efficient organizations the world has ever known—the army and the circus—find that the truck is a money-saver. The farmers are also finding that this is true.

Transportation is a big problem. Just now it is in an abnormal condition, and much inconvenient waiting is the result. For instance, a Kansas farmer who owned a bunch of hogs that he was ready to put on full feed for the market ordered a carload of corn to feed them. It was ordered in plenty of time to start the hogs fattening when he had planned. The corn was shipped, and should have arrived within a week. However, two months passed, and it was on a side track within 30 miles of him; but the railroads were congested and would not move it. He hired a truck to move it for him, and was so well pleased that he bought one.

"I consider I am in a way independent of railroads now. In fact, I own one," he said, pointing to his truck.

This experience is repeated in the case of Albert Schultz of Dodge County, Wisconsin. He had to haul his grain half a mile to his granaries from the threshing machine. His crops were heavy and the threshing crew often had to wait on grain wagons, and that, indeed, is expensive waiting—fifteen men waiting on one. So he said it would never happen again, and he bought a truck last year. He hauled 70 bushels of oats at a load, and as far as weight was concerned he could have hauled much more, but oats are bulky. At that, he was able to unload and be back again before they had another load threshed out. Endless variations of these experiences might be recounted.

The profitable use of motor trucks on farms is governed by the condition of the roads and the amount of hauling to be done. Over fairly hard roads a truck of 1½-ton capacity will operate to good advantage. With poorer roads the ¾-ton and ton truck are more practical, and with paved or exceedingly well-graveled highways the 3-ton truck, or even larger, will be a success if there is plenty of work for it to do. This point is nicely illustrated by the practice of an oil company which makes deliveries in the country, rain or shine, with its fleet of trucks.

When the roads are hard and dry, the company sends out its big 3-ton truck to fill country orders for oil, but in the winter and early spring months, and at other times when the roads are in bad shape, the company sends out a ton truck. The smaller truck is obliged to make more trips, but it can travel into yards close up to buildings where the ground is softest, and it can pull itself out of places where the 3-ton truck would be balked.

The automobile paved the way for trucks in two ways. The demand for the former led to the high perfection of the gasoline motor and the education of the people to the application of automotive power to freight as well as passenger traffic. The expansion of the automobile industry created large factories. This means a better product for less money. With horse-drawn vehicles this country had, as a whole, abominable roads. The automobile perfected those, or led to interest in them. The truck will increase this interest.

There are three well-known truck types: The converted automobile type, which is made by using the chassis of an automobile, by attachments reducing the gear ratio by furnishing especially designed rear wheels, and by strengthening the frame for the increased load it must bear. This type has proved very successful, but care must be used in selecting a good automobile engine. An automobile that will not deliver a smooth flow of power will not make a good truck, as a truck necessarily receives harder usage than a motor car. Many trucks of this type are in service. Then there is the commercial type in which all the parts are originally made for truck service. Another type which has shown up well in various experiments and in army work is the truck with a 4-wheel drive, the power being applied to the front wheels the same as the rear. This truck is of particular use where the roads are in bad condition.

"What will it cost to run a truck?" will be asked. Figures furnished by a truck expert give an estimate of what it would cost to operate a truck that would haul the same weight of load as an average farm team. The figures include these costs: Gasoline consumption per mile; oil, grease, cost per mile; mechanical repairs, tires, depreciation, license, insurance.

A trailer may be used to increase a truck's capacity, or it may be attached to an automobile for freighting

Here are the cost figures: Gasoline is taken at 20 cents a gallon, the consumption varying from 4 to 10 miles per gallon. Oil costs are taken at 50 cents a gallon, varying from 460 to 625 miles per gallon. Grease costs are taken from 1 to 3 cents per mile, varying with the size of the unit. Mechanical repairs, varying from 1.5 to slightly over 3 cents per mile. Tire sizes are taken as supplied by the manufacturers, and figure at net cost based on a guaranteed life of 7,000 miles. Depreciation is figured on a basis of 150,000-mile life. Thus, if a truck averages 20,000 miles per year, its life will be nearly eight years. You must remember that 20,000 miles yearly is giving you a vast amount of grain-hauling. Depreciation varies from 8 to 15 per cent per year, depending on the mileage and capacity of the unit, the cost of tires being deducted from the original cost. Insurance, covering fire, theft, liability, and collision, varies from $183 to $270 per year. Two-ton truck, miles per day, 52. Cost per ton per mile, 10.025 cents.

It is understood among farmers who have trucks that they can haul 10,000 bushels of shelled corn, or any other kind of grain, in a truck during the hauling season and save at least 30 to 40 per cent on hauling. Fifty-five bushels to a load, driving nine miles to the city, making five more trips than with horses, is a record made by one farmer in a week's hauling.

There are firms that manufacture convertible beds. These are used a great deal on trucks of the converted type. Some of the beds have as many as eight different adjustments, and anything may be hauled, from alfalfa seed to cattle or a huge crate rack for hauling bulky produce.

There is much risk involved in buying second-hand trucks of the heavy-duty type. A second-hand truck may be practically as good as new, but you have no assurance or protection. From my experience a used truck is a bad risk unless you know its complete history. Overloading, overspeeding, and general abuse will cause a crystallized condition of the metal, and subsequently it may break without warning even under an ordinary load. The breakage usually occurs in the axles or springs, but the transmission, or even the engine, may be affected. Also, solid rubber tires, apparently in good condition, may have lost their elasticity through overloading, and this will lead to a breakage of the truck's mechanism.

A new truck, like a new automobile, requires time for the bearings to wear smooth. For the first 200 miles it should not be driven at more than two thirds the rated speed, and not till the truck has been driven fully 500 miles is it wise to run it at its maximum speed. The engine will run better and develop more power after being broken in, whereas attempts to make it do its utmost while it is new will very likely cause overheated bearings.

The trailer is an adaptation for the automobile so that it may be used at will for light trucking purposes as well as for passenger service. Trailers are also used with trucks. Usually trailers are equipped with a spring coupling that takes the strain off the starting and stopping.

When in doubt as to the best size truck to select, the problem can frequently be solved by getting a reasonably light truck for general use. A trailer may be bought and the load increased. In this way you will not be paying depreciation on a high-priced heavy truck, and the trailer may be brought into use when an extra load is required.

Possibly the best form of trailer is a type that has been more recently developed. It is a solid-tire rear system, very much like the rear end of a truck, which is attached to a fifth-wheel mechanism at the rear end of the truck proper. This fifth wheel is attached very nearly above the rear wheels of the truck. I have seen almost unbelievable loads carried upon this form of trailer. It gives a positive form of steering the trailer, and makes the load practically as secure as if carried upon the truck itself. For long material like logs and lumber, it makes an ideal form of conveyance.

Where the owner of the truck is going to drive it himself he will of course not drive it at excess speed and cause extra depreciation of tires and the mechanism, but if the truck is to be turned over to another driver it would be well to have a governor-equipped motor. This will prevent speeding, which is the greatest destroyer of trucks next to overloading.

An elderly man I know has a truck fitted with a starter. This enables him to drive the truck himself rather than turn it over to a careless driver who could crank it.

Driving a truck is similar to driving an automobile, but not identical with it. More time must be taken in getting the truck under headway and in stopping it. More care must be used in crossing rough places in the road or over car tracks. The same parallel exists between the automobile and the truck that exists between the light driver and the draft horse. With trucks more care must be used in shifting gears, as the strain is greater, for the stress against the gear teeth is much heavier than in the automobile, particularly if you are driving a converted type. The truck cannot get up the momentum that the car does.

Light trucks are generally used where the roads are bad

When I Buy My Next Car

[CONTINUED FROM PAGE 6]

meetings. The first real vacation that we ever had was due to the fact that we had the automobile and went out to the mountains. We were gone a month, and camped out all the time. That vacation put more "pep" and vim in everybody than a rest of three times that long had we stayed at home.

When we went back home, everybody had a larger vision. We were interested in motors and electricity. Out in the garage, where we never stayed, we could turn a button and have electric lights from the headlights in the car. Some of the boys used to go out there to read. I used to do it occasionally and when I came into the house the lamps seemed awfully dim. The result was an electric lighting system. Then we had had a lot of jobs around the farm that no one liked to do. We bought a gasoline engine and rigged it up to pump water and grind feed. It occurred to someone that it ought to be made to run the washing machine, so a carpenter sawed out a wooden wheel and we bolted it onto the fly wheel of the washer, and there weren't any more blue Mondays.

Ready for Next Day's Work

When our car was new we started a practice that we have never given up. We bought it in June when the farm work was pretty heavy, and we used to take it out for little runs after supper. Everyone went. Those runs have never been discontinued. After a hot day in the field or a "scorcher" at the cookstove, we have found that those little 10-mile runs are good conditioners. A bath, a change to clean clothes, a quick spin to town, perhaps for a soda or a sundae, back home again, and you are ready for a good night's sleep, a sleep that fits you for a hard day's work.

I suppose before long I shall be in the market for another car. I don't know the name of the car that I am going to buy, but I have it in mind. The next car that I buy must be one of the numerous well-known makes that have good dealer service, so that I can buy minor repairs wherever I happen to be. I am going to avoid used cars. I am not expert enough to judge them. I have come to find out that it pays to study your instruction book, for the man who made the car knows what will injure its longevity. I have found out that standard brands of tires are cheaper in the end than unknown cut-rate brands.

The most important thing that I have found out is that it is not the first cost but the upkeep that hurts the bank account.

When I buy again I shall pay less attention to the personal guarantees of the agent, who in the heat of making a sale may be a little reckless with his statements, and I shall pay more attention to the written guarantee of the manufacturer who is willing to stand back of the material and workmanship.

The Car Scandal Mongers

I shall pay little attention to the curbstone condemnations of non-owners, who repeat and carry car scandal and gossip to the undoing of good cars in some communities. You will find that their story of breakage and bad faith in a car is usually based upon a single instance, and that back of the car trouble in question there is probably reckless and unintelligent driving.

I am going to insist on three things—beauty, economy, and a car that women can handle easily. Women ought to drive a whole lot more than the men. But there is one thing that I have not spoken of that I am going to do. I do not propose to let novices in the family drive our car without a thorough understanding of the principles. I am going to have them carefully study it, and I am going to show them all I know about it, and then I am going to give them an examination on the essentials of driving, upkeep, and economy. I will have two reasons for doing this: One will be because I cannot afford to have our car misused. Beginners learning by the trial-and-error way are very hard on a delicate mechanical contrivance such as a modern motor car is. And the second reason I have is that a car can be made into an infernal machine by ignorance, and I am planning to limit the chance of accident down to the very minimum.

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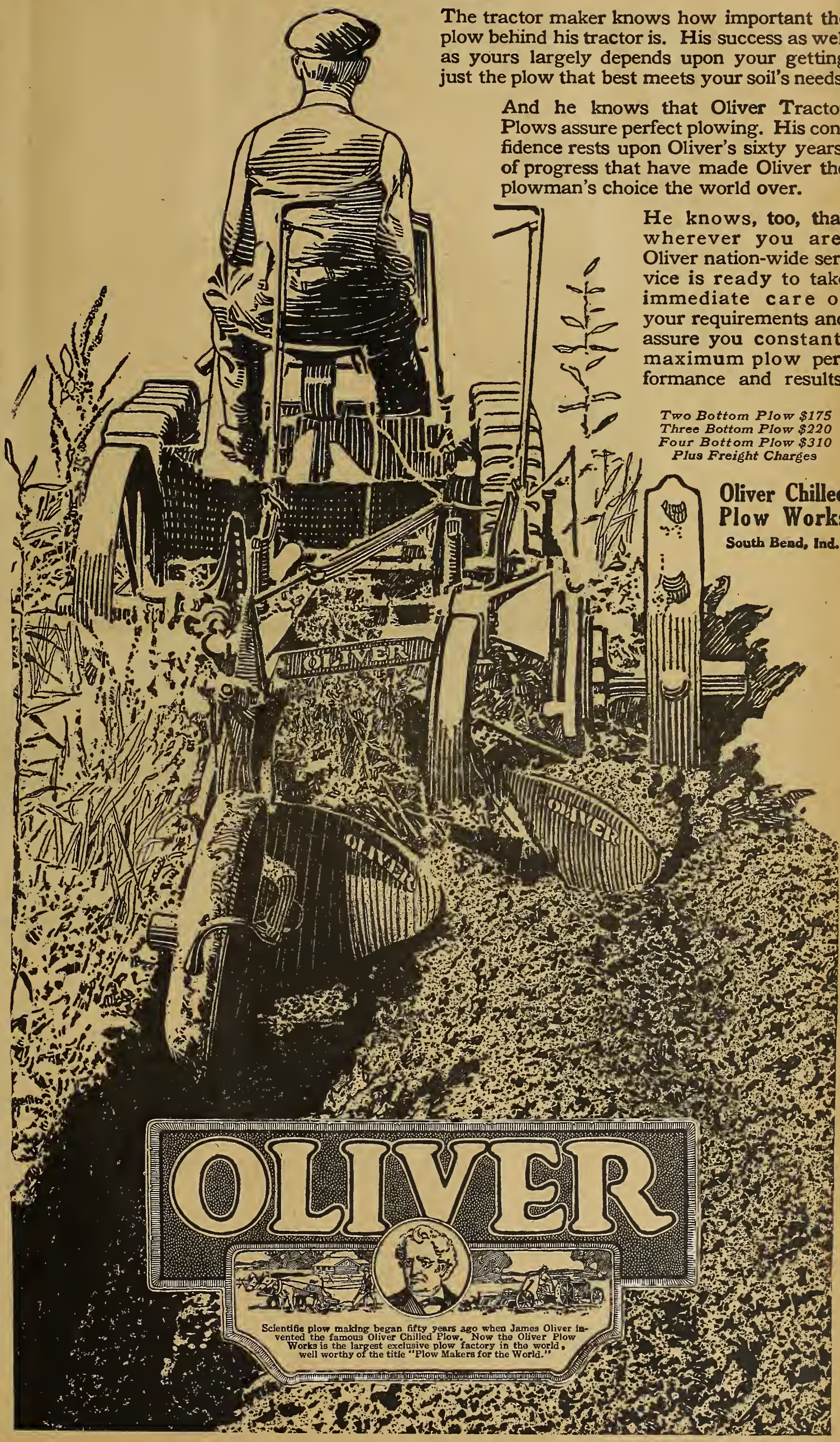


The Confession of a Timber Buyer

By John Calderhead

IT WAS quite a come-down to find that my new job demanded that I learn the best methods of beating the natives out of their timber. There was nothing to do, however, but to make the best of it, as I was determined to learn the lumber business from beginning to end.

After we finished our "tower," as Mr. Cooney called it, I settled down to put into practice the working principles he had outlined. From the county tax assessor's books I got a list of all of the landowners in our territory, and made a map showing just how much land and timber each man owned. Whenever any one of these got drunk and was arrested or a death occurred in his family or among his stock, or anyone got married or was involved in a lawsuit, or anything else which would make him need money, Mr. Cooney or I would arrive on the scene, quite by accident of course, like a benevolent buzzard, and after a little dickering the company would get another forty or eighty or a quarter section at about half of what it was worth.

In more cases than not it was less than half. Yellow pine stumpage was valued by people who knew its worth at $4 a thousand. Our top price to the natives was $2 a thousand, and whenever I had to pay the top price I felt as though I were not up to form.

Mr. Cooney and I worked both separately and together, but after one experience we always kept each other fully informed as to how our various trades stood, so that there could be no chance of spoiling things for each other. The one time I have referred to came soon after my arrival, so that in the end we profited by it.

Tom Evans, over on Little Sandy, had 80 acres of what Mr. Cooney called "fair to middlin'" timber, for which the old man had been dickering for some time. Evans' wife was "took down" with a "spell," and there were all sorts of bills for medicine and a doctor. I had looked the timber over and found that it ran about 5,000 feet to the acre. It was worth, at the price we paid, at least $800. As soon as I heard of Mrs. Evans' illness I rode over to see Tom to offer my condolences, and after a morning's bargaining I took an option on the stuff for $500. I was feeling pretty well satisfied at my success in getting the $800 worth of timber for $500 when I met Mr. Cooney. He was, he told me, on his way to Evans' to buy his timber, having made a verbal agreement with him the day before to pay $350 for it.

That never happened again. But we very often worked it the other way. One of us would make what was, from our point of view, a fair offer for a patch of timber, but would not close the deal. Then in a couple of days the other one would happen along and, after a supposedly careful estimate, would offer a hundred dollars or so less than the first, and swear by all that was holy that the timber wasn't worth any more and the company couldn't afford to pay another cent for it. Usually the man who owned the timber would hurry across country to accept the first offer before it could be withdrawn.

But it wasn't all easy sailing by any means. I struck snags when I expected easy going, and, on the other hand, I traded with people Mr. Cooney had never been able to do business with. There was old Dr. Kraut, for example, who had 2,000 acres of the prettiest pine that ever grew. He didn't trust Mr. Cooney because of the old gentleman's reputation as a sharp trader, he told me confidentially. His timber was being eaten up with taxes, and he was crazy to sell, but was afraid Mr. Cooney would beat him on the trade. I bought all the timber he owned after an hour's bargaining, and paid him $20,000, or about a fourth of what it was worth, though he was quite satisfied with what he got.

On the other hand, Aunt Mary Goforth, Uncle Bill's wife, took a dislike to the way I wore my riding trousers and puttees, and announced positively that she wouldn't sell her timber to "no darn blowsy-breechied Yankee." She wouldn't either, and it fell to Mr. Cooney to make the final deal. He did it with an ease which made me wonder, and he paid hardly half what I would have paid.

Several times my deals were held up by women, and I had to raise my price after I had convinced the supposed head of the family that I was offering every cent his timber was worth. There was old Mrs. Clayborn, for example. The Clayborns were rather more intelligent than the average, and in addition to his 160-acre farm the old man owned 320 acres of the tallest, biggest yellow pine that ever gladdened the heart of a timber cruiser. Mr. Cooney's mouth fairly watered when we looked it over. He had been trying to buy that timber for five years, but thus far he hadn't got anything more than the refusal of it. Even at $2 a thousand old man Clayborn's timber was worth $35 an acre, and the trouble was that the old fellow had a pretty fair idea of how much there was. Mr. Cooney had gradually raised his offer to $19 an acre, which he protested was more than the company would get out of the timber.

One day I heard that Clayborn had made up his mind to send his son off to school. I knew that meant he would be needing money, so I jumped on my horse, phoned to Mr. Cooney, and we started for the Clayborn farm. We timed ourselves carefully, and reached the place in the middle of the afternoon. It was hog-killing time, and we arrived early enough for me to help cut up and strip two big hogs which had been slaughtered that morning. Mr. Cooney had the happy faculty of standing around and directing things and giving the impression that he was doing more work than anybody, without really doing anything at all.

The boy held the pen while his mother made her mark, for she could neither read or write

After supper we settled back into a skirmish for position. First, I led young Clayborn to talk about scientific farming, in which he was interested, though he knew very little about it. Between times Mr. Cooney was telling the old man how hard times were and how tight money was, and about some little sawmill man he knew who had cut all of Buck Thomas' timber and skipped out without paying for it, and had the mill in his wife's name, so they couldn't sue him. I finally got the whole family laughing at some of the stories I told them, and everybody was in a good humor. Then young Clayborn blurted out that he "aimed to go" to the agricultural school, and I volunteered to write some people there whom I knew, and would see that he got started right. Mr. Clayborn asked what it would cost, and I gave a detailed account of the various items, adding that, while it was expensive, it was worth it. Finally, under Mr. Cooney's skillful guidance, Mr. Clayborn said he was thinking of selling his timber.

Then we unlimbered our heavy artillery, so to speak. We raised our offer a dollar an acre. I figured out what the amount would be. After deducting the cost of the boy's first year at school, which I knew Clayborn would want in cash, I offered to borrow the remainder from him and pay interest on it. This gave Clayborn an investment for his money. I showed what the interest would be, by the year, month, week, and day. That last offer appealed to the old man mightily. At twelve o'clock we had won him over, but it was too late to make out an option, so we went to bed.

All the evening Mrs. Clayborn had sat over in a corner by the pine-knot fire without saying anything. After we turned in I thought I could hear the sound of voices from their room for a long time after everything else was quiet. I had a hunch right then that the old lady wasn't satisfied.

And I was right too.

Following the custom of the hill people we were up next morning long before daylight, and went down to the barn to feed and water our horses and help our host with his stock. Then we went back for breakfast by lamplight. Nobody had much to say. The friendly spirit of the night before had been replaced by what I couldn't help feeling was a distrustful glumness on the part of our hosts. Our pleasantries and jokes seemed to fall flat.

After breakfast I filled in an option and said, "Now, Mr. Clayborn, suppose we see how this sounds to you," and I read the thing through. Mrs. Clayborn's beady black eyes seemed like gimlets. I could feel them boring through me. "If that strikes you all right," I said when I finished, "I'll get you and Mrs. Clayborn to sign it, and I'll go up to town and get your check." There was a long silence, during which Mr. Clayborn looked out of the window deep in thought and Mrs. Clayborn scowled at him sullenly, as if scorning his lack of determination. After a while the old man's gaze came back to his wife and he seemed to take courage. "I couldn't sell it for $20 er acre," he said finally.

Mr. Cooney and I feigned tremendous surprise, but Mr. Clayborn ignored our ejaculations and went on quite calmly. "I and the old woman been thinking it over," he told us, "and we believe the timber's worth more'n you've offered to give."

"But you said last night—" I began.

"Yes, *he* said, but I didn't," snapped Mrs. Clayborn, "and I ain't goin' to sign away our timber for no $20 er acre."

Her tone was belligerent, and Mr. Cooney and I were quick to see the necessity of pacifying her. The old man was on his mettle.

"Well, sir," he said to me, "I'm kinder thinkin' we done forgot our raisin'. Yes, sir, here we set last night with our frolickin' and talk about buyin' this here timber, and sure as cracky we never said a word to Mrs. Clayborn. We just left her out, and I'm 'shamed to admit it, fer I don't know of nobody that knows as much about what's what an' is fairer to trade with.

"You'll have to 'scuse us, ma'am," he went on to the lady. "You sure done right to learn us not to fergit the ladies, ma'am, and it 'ud serve us right if you was to ask us right out of your house. But I'll promise you we'll not fergit it again, and if we do you jest ketch up that rawhide you keep there to whip the houn's out o' the house with and start in on us." There was more along the same line, and Mrs. Clayborn appeared to be in better humor.

"What will ye take fer the timber?" Mr. Cooney finally asked her. The old sullen look came back.

"Twenty-five dollars er acre," she said firmly. But Mr. Cooney shook his head sadly.

"We'd better be goin'," he said to me; "Mrs. Clayborn wants more'n we can give her. I'm afeared somebody's got her to thinkin' she's got more timber than is thar, and if she wuz to sell for less she wouldn't satisfied. I'd ruther she'd sell to somebody else than for her to think I would try to beat an old friend down on her price. All I hope is she won't sell to nobody that'll promise to give her more'n the timber's wuth and then cut it and skip out without payin' nuthin'."

Now, that timber was actually worth $60 an acre, and I told Mr. Cooney so as we went to the barn after our horses. Also I told him I intended to pay the $25 an acre Mrs. Clayborn asked. But he begged me to hold off a little longer.

It was the boy who saved the day for us. He was a bright, likable lad, eager to learn, full of ambition,

and what I had told him the night before of the opportunities he would have at the agricultural college had set him on fire to see something of the outside world. We had left him at the house, and as we came back with the saddled horses I saw that he had been pleading for the sale of the timber which would furnish the money for his course. I determined to make a final try.

"Mrs. Clayborn," I said, "Mr. Cooney and I have been talking it over. We want your timber, but you ask more than we can pay. Charley, here, is ready to go off to college and learn the things that a man has got to know nowadays to amount to anything. He's bright and smart and wants to go. If he waits he may get out of the notion, and he may never have another chance. If a hurricane was to come along and blow down your timber, or the bugs get into it and kill it, or a bad fire burn it up, you couldn't afford to send him, and he would never have the chance you can give him now. If you will take $22 an acre for the timber we'll give you that, but if you won't we can't trade."

The boy's eyes flashed appealingly to his mother. He was a fine, stalwart lad, cleaner-cut and straighter than most boys of the hills, and she was proud of him.

"You'll be giving him his opportunity to make a man of himself," I told her. There was a long silence.

"Well, if that's the best you kin do, I'l take it," she finally said. There was an exclamation of joy from the lad and a sigh from Mr. Cooney, and we proceeded to fix up the option. The boy held the pen while his mother made her mark, for she could neither read nor write. The price was more than we had counted on paying—Mr. Cooney still mourns the extra $2 an acre—but the timber was cheap at that, and I knew that the company was lucky to buy it before the boy went to college. A year at an agricultural school for him and we would have had to pay something like what it was really worth. In fact, the Boss said as much himself when I told him of the affair.

Now the Boss is an up-to-the-minute business man and a philanthropist, or at least that's what the papers call him. His sawmill is a model of reinforced concrete and steel which gets more lumber and lath and shingles out of a log than any other I know of. The town, modestly named after the Boss, is likewise a model of what an industrial town ought to be. It was laid out by a famous municipal engineer whose bill ran up to five figures.

There is a library, a gymnasium, swimming pool, baseball and football fields, tennis court, and community assembly-rooms. Instead of the usual shacks of most sawmill towns, there are neat and artistic bungalows containing from four to eight rooms, all stained in soft colors. The streets are shaded by trees.

There is running water, bath, and sewer in every house, and an up-to-date store has supplanted the old-time commissary and sells first-class goods at moderate prices. The Boss is not a little proud of his mill and his mill town, and he brings down parties of high-brow reformers from the North to see what he has done, modestly disclaiming any credit for his efforts to help his workmen.

The Boss Strong on Uplift

And every once in so often, when the mill has made a good showing, the Boss will go to a meeting of some uplift league he belongs to, and the papers will publish extracts from his speech and pictures of the model town and its benevolent philanthropist.

But down in the lumber camps where I used to spend my time there was a different story. Instead of neat bungalows, there were low-roofed, vermin-infested box cars set in long rows on bare side hills, where the summer sun beat down with full fury and turned the shacks into veritable hells. Instead of running water, there were shallow wells without adequate protection against surface drainage and wandering "varmints." No provision was made for the disposal of the sewage of three hundred persons, white and black; the only bathtub in camp was a portable affair I brought in from town.

Instead of a decent store, a commissary in a box car dispensed fourth-rate goods at high prices. The only fresh meat was that brought in by an occasional farmer, fly-covered and bloody. Sometimes there was ice; more often there was none; and in the terrifically hot days of midsummer, when the heat seemed overpowering, little dirty, tow-headed children gasped for air in the fly-ridden shacks, and begged for cool water when there was none to be had.

Diseases of all sorts appeared as a matter of course. We had everything from chills and fever to spinal meningitis. Nothing was done to check the sickness. A contract doctor lived in camp and was supposed to attend the sick, but I for one would have preferred to suffer untended than to submit to his ministerings. And more often than not the superintendent overrode his advice and refused to take even the slightest health precautions.

Do you wonder there was always some reason why the Boss' high-brow friends were not brought down to the camp?

It was here that I had my headquarters, in order that I might keep in touch with the logging operations and the farmers as well. I soon became familiar with every hill and hollow in the county, and in my dealings with the natives I got acquainted with every resident.

People Needed Money Badly

To some of these people the camps were a boon, because they furnished markets for farm products. Many others neglected their crops to get work on the logging crews. This was in my favor when it came to making a trade, because the people needed every bit of cash they could get and were anxious to keep in the good graces of the company even though it meant sacrificing their timber. There were also various tidbits in the form of construction and grading jobs which we gave to the men who "treated us right" in deals for stumpage or rights of way.

After all, we had every advantage. The Boss had a gentleman's agreement with other big lumber companies of the region to keep "hands off" in our territory, and unless the farmers sold their timber to us they seldom had a chance to sell it to anybody else. Nine times out of ten I was able to trade with them, but whenever we struck a man who had his sights too high and who refused to sell for what we considered a fair price, we skinned off all the timber near him and left his little patch high and dry, to be eaten up by bugs or killed by the fires which swept the cut-over lands after the loggers had passed on.

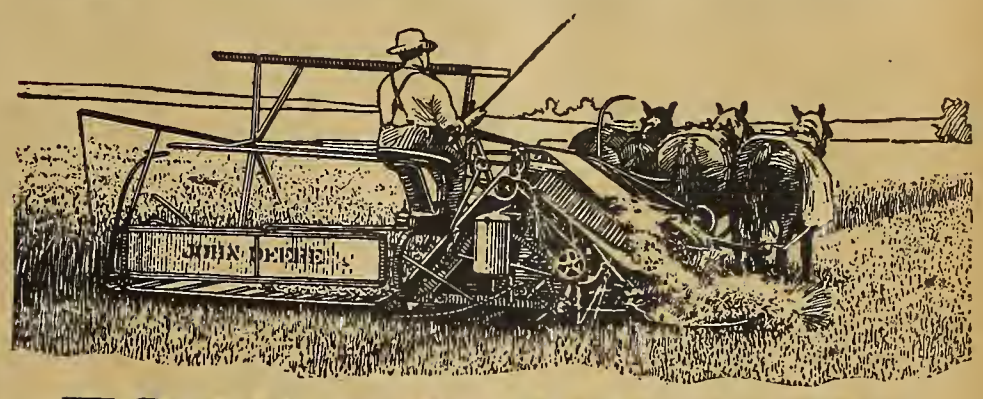
This was only a short time ago, but the county agent had not reached the more isolated counties of our State. The people in our territory had never seen or heard of a county agent, and would not have known whether it was a new kind of corn or a remedy for the boll weevil. The people had no idea how much timber they had or what it was worth. They had no idea how to get this information except by hiring a high-priced timber cruiser. Had they only known it, they could have secured expert advice from the Forest Service at the cost of a postage stamp. But they didn't know it, and they lost money through their ignorance.

Things are better now. The hill people are learning, and learning fast. The county agents are helping them, and the fact that expert foresters are now assisting the county agents in advising the farmers about the best ways to handle and sell their woodlot products will help save the timber owners a lot of money. There's no excuse now for any small owner not getting all that his timber is worth. Had this system been in operation a few years ago, Mr. Cooney and I would not have had the success we did.

I never attained Mr. Cooney's proficiency in driving a trade. He had grown up in the business and had no compunction in resorting to any device to lower the price of the timber he was buying. And he was, I suppose, no worse than hundreds of other land agents all over the country. But the poverty and ignorance of the hill people made it hard for me to press the advantage I had over them. Even with my shortcomings as a trader we made a lot of money for the Boss.

But it was too raw work for me, and, although I had started out to learn the lumber business from A to Z, I got out of the Boss' employ as soon as I had learned all of the crooks and turns of his business.

Harvesting Costs Reduced By this Better Binder



JOHN DEERE Grain Binder

THE cost of harvesting your grain depends much upon the binder. Binder value is determined by the number of acres your binder will cut and bind, the cost of maintenance and the continued satisfactory service you get. Knowing good machinery, you will recognize, quickly, the extra value in the John Deere Grain Binder. It is built right throughout—especially improved at points where binder troubles usually start. The John Deere Binder meets successfully abnormal conditions. In heavy tangled grain, in short, irregular grain, in wet fields the John Deere has proved the better binder. It is dependable to an unusual degree.

Built Better from the Bottom Up

The main wheel—the driving power for the machine, is bigger and more liberally proportioned—equipped with roller bearings.

The main frame—the backbone of the machine—is wide-lapped and hot-riveted together—unusually strong and rigid. Bearings are self-aligning. Main working parts always run true.

Binder platform made of angle steel sills, reinforced by heavy wood sills. Four angle steel cross sills tie the platform together rigidly. Knife runs freely even under most severe field conditions.

Three packers are used instead of two—the John Deere makes better bundles. It handles tangled and irregular grain better than others.

Wearing parts of knotter consisting of cut steel gears and drop forged parts are case hardened, insuring longer life and better working qualities—ties better and lasts longer.

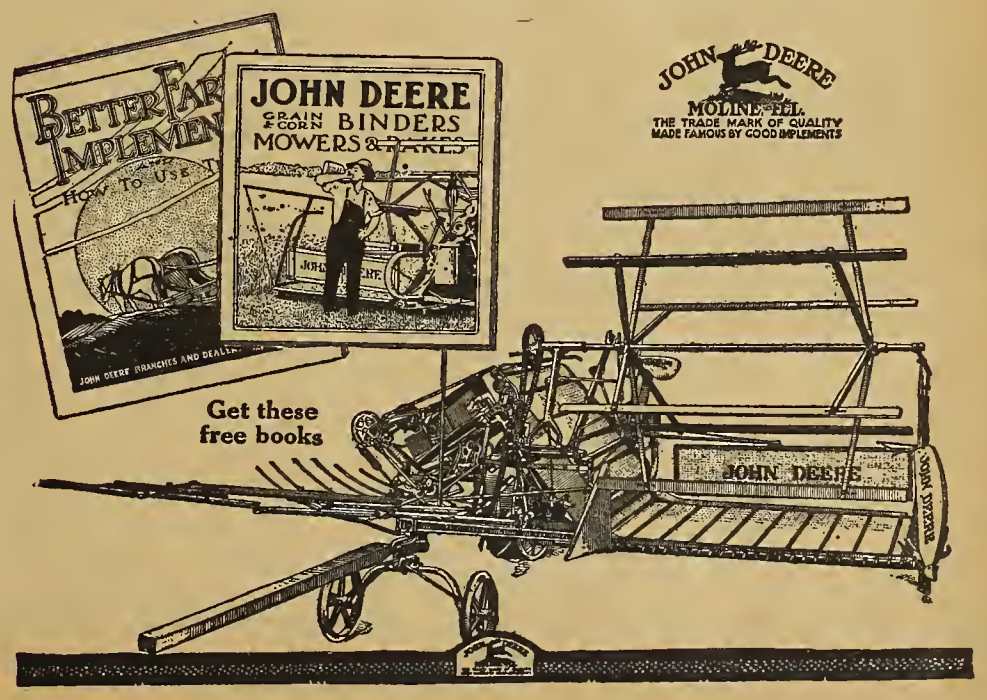
Quick turn flexible steel tongue truck. The wheels turn faster than the horses—makes square turning possible. Easier for the horses to pull—easier for the operator to handle the binder.

These are only a few of the many features that make the John Deere the better binder. The minor details of construction, the materials used and their application, the design, the workmanship are of the highest order. Compare the John Deere with others—see it at your John Deere Dealer's Store.

Write for Free Package GB-28

and get the big booklet that tells all about the John Deere Grain Binder and other John Deere Harvesting Machines. Illustrations show you exactly wherein the John Deere Binder excels. Also big free book ***"Better Farm Implements and How to Use Them,"*** a farm machinery text book, worth dollars. Write today.

JOHN DEERE, MOLINE, ILLINOIS



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APRIL 1918

Notice to Subscribers

ALTHOUGH railroad congestion has been relieved to some extent, not all of the mail trains are running on time. If your copy of FARM AND FIRESIDE doesn't reach you promptly, please wait a few days before writing. The magazine will probably be in your hands by that time.

A Mess of Pottage

EVERY now and then the publicity agent for some city announces proudly that his town is the biggest corn market or the biggest hay market or the biggest oats market in the entire region, if not in the world. He is looking for commendation, and he always gets it, but only from those city people who see the money rolling in now and do not think of the future.

When a city is the biggest market for any product that may be profitably fed to live stock, it is laying up disaster for itself. The fact that the city is such a market means that the farmers round about are selling away the fertility of their soil. Instead of returning to the ground the food that the crops have taken out of it, they are sending this food to other regions, where it will fertilize other farms or be forever wasted through the sewers.

This process cannot continue indefinitely. Sooner of later there must come a halt. The fertility of the soil will decline to so low a point that farming is no longer profitable, and the land will be deserted, as has already happened in many places. The inevitable effect is to reduce the principal cities of the region to stagnation.

Cities that are wise encourage live-stock farming and every other agricultural practice that will result in the permanent, not merely the temporary, good of the region. Whatever is good for the farmer is, in the long run, a good thing for the city.

Our Prospects of Victory

ALTHOUGH there is evidence of incompetency and faulty organization at Washington, it isn't to be wondered at when you think of the tremendous growth our war machine has made in the last year. No other nation has ever done as much in so short a time.

True, there have been many false starts and mistakes made, but they are being corrected rapidly. The men at the head of our war machine are just as eager to get the full strength of Uncle Sam's hands at the throat of the Hun as we are. And, what is more, they are doing it.

General Pershing has asked for a bridge of ships to France. Our shipping board is undertaking to turn out six million tons of ships this year, although before the war the shipyards of the world turned out but three millions in their best year. Many ship builders think this impossible. But what army man a year ago would have risked his reputation on a declaration that our army would be as large as it now is? A nation, like an individual, never knows how much it really can do until it has to do the unusual.

Six million tons from the United States with what England, France, and the neutrals can do will turn the scale against the submarines if they maintain their 1917 performance throughout 1918. Neither the Allies nor the Huns will have a superiority in men and guns on the western front this year.

General Grant got much comfort out of this maxim during the dark days of 1864: "No matter how bad things look to me, they are looking just as bad to the enemy."

You may be sure that the Germans are not at all happy over their prospects of winning the war. Behind the Rhine there is hunger, lack of confidence in their Government, and unrest. They know that peace with the Bolsheviki and gains in Italy don't end the war, and that, until they make peace with the United States and England, the seas are impassable to German commerce.

Unlimited submarine warfare hasn't lessened England's fighting power. Another year will not. And the gigantic power of the United States gets closer to the German frontiers every day.

The war will be won by the side that is the most determined to win it. Many experienced military men believe this year will witness a collapse of the Kaiser's determination to conquer Europe—and the world.

The Toll of Rust

AT ONE time it may have been cheaper—though even this is doubtful—to let farm implements stand out of doors than to buy lumber to shelter them. When steel was cheap and plentiful, it was an easy matter to buy more machinery for comparatively little money.

Nowadays, however, because of the war, all machinery has soared in price, and, with a small supply on hand, there can be no doubt as to the economy of providing shelter for farm machinery. The inexpensive shed, which is all that is necessary, will pay for itself many fold in the longer time the implements will last when properly cared for. In addition to this it is a patriotic duty to conserve the supply when such vast amounts of machinery are needed by the United States and the Allies.

Idle time is the greatest waste in farming. At seasons when work cannot be done in the fields, time cannot be better spent than in building a shelter for the farm implements or in repairing it if it has begun to go to pieces.

Moreover, the providing of such odd jobs will enable a man to keep with profit a better class of help than he could otherwise keep, for he will be able to furnish employment at a good wage the whole year round.

True and Tried Allies

THE American farmer not only feeds our own soldiers and those of our allies, but the people of the allied and neutral countries as well. Because he is the base of supply of a great part of the world he has to speed up his production. He must do more work in less time than he ever did before. He must do all this work with much less help than he has had in former years.

How can he do this? He can do it by using improved machinery for preparing the seed bed, planting the crop, cultivating and harvesting it, a gasoline engine for small jobs, a tractor for power, and an automobile to run the errands and make the trips to town.

The automobile is of especial importance at this time because it enables the women-folk and the younger members of the family to run the errands and to make the trips to town so that the men can stay in the fields. The women wouldn't have time from their other duties if they had to drive a team—to say nothing about taking a team out of the field at such a busy season.

Before the war many people looked upon the automobile as a pleasure car. But that notion has been changed, like many others we all had before we started in to save the world from the blight of the Hun.

That the automobile is a necessary part of the farmer's equipment is shown by the fact that out of the 4,000,000 automobiles in this country 2,700,000 —or over half—of them are owned and operated by people living on farms or in the small communities near them.

God's First Temples

AN AMERICAN poet who is now fighting on the scarred, treeless battlefields of France sings:

I think that I shall never see
A poem lovely as a tree.

His conviction is the conviction of all of us. From the beginning of things, trees have had the reverence of mankind. To early peoples they were things of thought and feeling, of desire and will. In the trees, according to the ancient Greek beliefs, dwelt some of the happiest, most beautiful spirits that blessed the earth. Even to-day, to us, there is no object in nature which reveals the divine more effectually than does a symmetrical, green-leafed tree.

When we plant trees in our yards, therefore, we are surrounding our houses with constant revelations of the beauty and goodness of God. Arbor Day—"Mother Earth's Christmas" it has been called—means more to us than simply one of a number of interesting holidays. It brings home to us, in a way in which no other holiday does, the beauty and the holiness of nature.

Arbor Day is celebrated this year for the forty-sixth time. Established in Nebraska in 1872, it has been adopted by State after State, until it now amounts to a national institution. It is a day for observance in schoolyard, in churchyard, in park, in orchard, on the home grounds. There is no place where trees will not add beauty. Of course, the planting of trees is the fundamental purpose of the day, but there should be more than this. Community programs, with perhaps a bit of dignified ceremonial accompanying the tree-planting, will make a permanent impression, especially on the minds and hearts of the young.

There are few things that help more in the development of sound, straightforward character than a love for nature and its beauties. "The groves were God's first temples," and many of us have learned to know that He still loves them.

What About the Girl?

A GREAT deal is said about keeping the boy on the farm; not so much about keeping the girl there. Yet the latter is quite as important as the former. The country needs fine, competent women leaders in community life fully as much as it needs men who will lead in first-class farming.

The home and its surroundings are what count in keeping the girl interested in rural life. Every girl, as she grows up, wants attractive, interesting things. If she cannot find them at home, she will find them elsewhere.

It is not an expensive matter to make things attractive for the growing girl. It is more a matter of thought than of cost. She wants, first of all, a pretty room. A man or woman who is at all handy can enamel the furniture in white. Flowered chintz can be bought and curtains easily made for the windows.

That leaves just the floor and the walls. Wall paper is needed anyhow. It might as well be attractive and harmonious with the rest of the room as not. The floor may be painted to match the furniture, and two or three inexpensive small rugs or one larger one may be purchased.

Some good magazines will interest her. Her teacher can tell you what she will like. Magazines make good presents for a birthday or at any other time. They are surprisingly cheap, and each succeeding issue acts as another remembrance of the donor.

In summer, of course, any girl wants to spend some time out of doors. Why not let her take full charge of the flower garden? You want a flower garden, anyway, and she will give it more time, attention, and loving care than any other member of the family would think of giving. She will learn a lot, too, by planning a flower garden and keeping it going. Caring for a flower garden is not bad as a preparation for caring for bigger community enterprises that may come later on.

None of these things cost much money. Of course, they all cost something, but no more than a reasonably prosperous farm family can afford—no more than it would gladly expend if it realized that this meant the difference between the girl's staying in the community and her going to the city to make her own way.

On the Way to Verdun

[CONTINUED FROM PAGE 5]

to listen, listen for the things they could not see. The wastage of war was on every hand. But at the same time you saw nobody openly dispirited or disheartened. The children scuttled about the groves of trees on the street, and later the picture shows opened up to delight young and old alike; only, you noticed the absence of young men and noted the numbers of old folks and children.

Several battered old relics of automobiles were "stabled" in a small court, reached through a high wall pierced for two great gates. The youngsters got their driving tests in these old "ice wagons." Everybody had to take a ride with one or more of the teachers before they qualified. If you got a "very excellent" grade on the first trip, then you were exempt from further driving; if not, you drove until you qualified. If you didn't show signs of making good after a few trips, you were either sent over to the American Ambulance hospital at Neuilly or returned home.

One of our drivers was a young Englishman named Vaughn. He was a fine driver, but was somewhat unused to the ways of the American youth. One of our fellows, nicknamed "Billy Sunday," was taking his first lesson. Vaughn told him the first thing to do was to see that he had plenty of *essance*, which, in plain United States, is gasoline. Billy removed the seat and got the cap off the tank all well and good, but he couldn't see just how much was in the tank. Nothing daunted, he hauled out a match, lighted it, and was just poking it down the vent, when Vaughn spied him. In half a second there would have been a perfectly nice young ambulance driver candidate spoiled beyond repair.

"My word," said Vaughn to me later, when the crowd had collected and got its breath, "in a minute he'd a blown his bloomin' bloody face right off, and mine too—and me with a bit of a wife and three children and no insurance."

The day we got into Paris, there was a farewell banquet given to a departing section which was scheduled to leave for the front next day. We heard that as soon as another section could be made up, it too would be rushed out. Very naturally all the two hundred or more newcomers wanted to go out in this next outfit. As many of the fellows had been waiting, some of them for weeks before we got there, I couldn't see much chance for me. But by dint of hard training and, I am ashamed to say, of pestering the officials until they wanted to get rid of me, I managed to be one of the eight or nine lucky new arrivals who were ordered into Section 18.

It was a proud day for me when I screwed the little brass name plate, engraved with the name of the donor of my car, on the sleek gray side. Until the day came for our getting away I lived close to that car. I tuned it up and I untuned it; I washed it and I polished it; I overhauled the tools, the kit, the spare cans for gasoline, oil, and grease; and I took little joy-rides around the garden until I got to know it and its little mannerisms.

Could Carry Four Wounded

Old No. 590—my car number—was very much ahead of her sisters of the squad. Ours were brand-new cars with the latest type bodies. They were built to carry three *couches*, or lying-down cases, or four *assis*, or sitting cases. Inside the body were two wooden rattan seats which, when not wanted, folded up, and fastened so that two stretchers could be placed on the floor of the car and one slung above from racks which let down from the side walls. The inside was painted white and gray. There was a little door facing the driver, and two doors, one on each side, opened to give air, when desired, to the wounded. The body of the car was nicely painted, and had the French and American flags intertwined. We had no wind shield, but had side and front canvas curtains.

Our drivers had come from many States and many lands. One boy was the son of an Italian count; another had a father and mother in France, and had been brought up as a Frenchman, but was in reality an American; still another hailed from Denver. One was from Georgia, while others claimed Cleveland, Boston, New York, Chicago, and Princeton as their abodes.

The night of our banquet came. We were all speculating and wondering where we were going. It is a matter of pride among the sections to go to the sectors where there is "something doing," in American slang. At our dinner was Mr. A. Piatt Andrew, our chief; a prominent author; the Paris representative of our own forces in the field; and other well-known people. We were introduced to our French lieutenant, charming, polite, and polished, and we all fell in love with him at once.

At the Farewell Dinner

Mr. Andrew in his little speech said: "I wish I could tell you where you are going. You want to know. But it is impossible. I will tell you that only a few days ago I visited some of the places where you soon will be on duty, and there, on my way to one, I passed the rusted and ruined remains of an ambulance, wrecked by shell fire nine months ago. I got out and picked up a piece of the radiator. Other pieces of this same radiator were removed from the back of one of our drivers, William Barber, of Toledo, Ohio. He has been decorated with the highest French honors for the work he did at this post. I can only say you will have plenty of excitement there. I know you will all do your duty as you see it, with honor to our own country—to our own country and France, our other country, because every man in this world who thinks clearly and has a heart has two countries these days: his own and France."

Then I knew where we were bound. The magic name "Verdun" echoed through my brain, and I felt the first thrill of the many that I experienced during the next seven months.

New Kansas State President

By N. A. Crawford

DR. W. M. JARDINE, newly elected president of the Kansas State Agricultural College, is one of the leading authorities in the United States on dry farming and other phases of agronomy. He was a former president of the American Society of Agronomy and of the International Farm Congress, which has given much attention to dry farming.

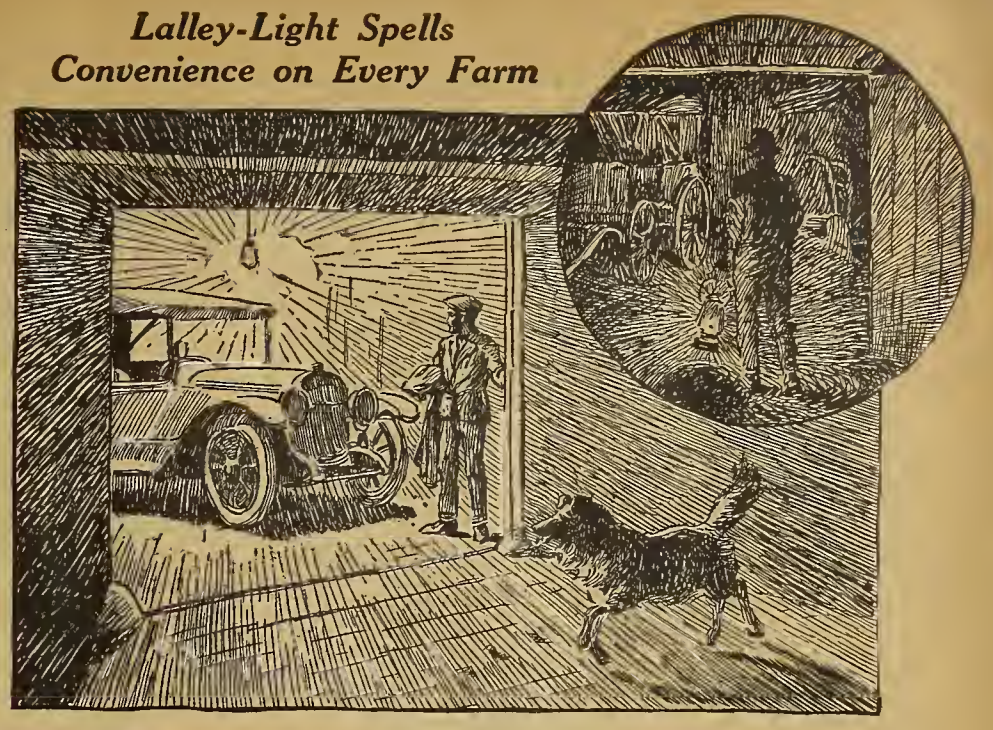
Dr. Jardine spent his early life as a ranchman on the Western plains. Going to the Utah Agricultural College, he made a brilliant record, and since that

Dr. W. M. Jardine

time has served as a faculty member in several well-known colleges and as an officer in the United States Department of Agriculture.

Dr. Jardine came to the Kansas State Agricultural College in 1910 as head of the department of agronomy. Since 1913 he has been dean of the division of agriculture and director of the agricultural experiment station. His work at the college has been so notable that upon the resignation of Dr. H. J. Waters, Dean Jardine's appointment was regarded as the logical step.

Lalley-Light Spells Convenience on Every Farm



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Lalley-Light, in effect, is two electric light plants for the price of one. For it provides two sources of light and power, both reliable and efficient.

One of these is the storage battery. The other is the electric generator.

Current used direct from the generator—giving bright, steady light, without a flicker—does not pass through the battery. That is an economy, for the life of the battery is prolonged.

When only a few lights are required, it is more economical to draw current from the battery, with the generator idle.

Few, if any, other plants afford this optional use of generator and battery.

Lalley-Light brings to your farm electricity in its simplest, safest, surest form. Its reliability is established by nearly eight years of successful, every-day farm use.

It is so simple that even your boy or girl can run it and give it all the care it needs.

The engine, direct-connected to the generator, starts when a button is pressed. If run to replenish the battery, it automatically stops when the battery is fully charged. If the battery needs charging, a bell rings to warn you.

These are distinct Lalley-Light advantages, over and above the great comfort and convenience—the perfect safety and the proved economy—of electric light and power.

On thousands of farms Lalley-Light keeps the young folks contented; it is a boon of comfort to the old folks.

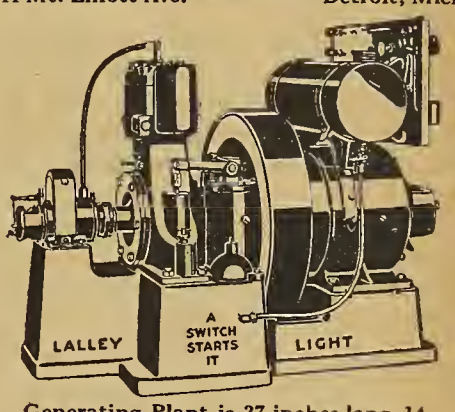
Its light is always ready—waiting, in a flood, for the turn of a switch—in house, barn and outbuildings.

Its power is ample to pump water and to run much of the smaller farm machinery—decreasing labor inside and outside the house. All at a daily cost the average farmer can well afford.

Write us at once for the illustrated free booklet which tells, in detail, what Lalley-Light is and does. We will tell you where you can see Lalley-Light in operation, and give you the cost of the complete plant, delivered to you.

Send a postal card or a letter today.

Lalley Electro-Lighting Corporation
1844 Mt. Elliott Ave. Detroit, Mich.



Generating Plant is 27 inches long, 14 inches wide, 21 inches high. Storage battery is included in complete outfit.

LALLEY-LIGHT
THE BALL-BEARING ELECTRIC LIGHT PLANT

Maple Sugar in the Making

By James Lampman

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Quick evaporation improves the product

IN THE day of our grandfathers innumerable hills and slopes were crowned with giant maples from which each spring came uncounted tons of maple sweets, both sugar and syrup, suited for every use. Now the sugar maple has gone the way of our other timbered areas, and only here and there remains a sugar bush of commercial importance.

One noted region where the sugar maple was long at its best is Geauga County, Ohio, almost in sight of Lake Erie. Here a limited number of farmers have continued to conserve their maple groves, which now are the hope of those homes whose inmates have been regularly supplied for years with maple sweets.

The story of our own maple-sugar operations will serve to show how little the harvesting of maple sweets now has in common with the maple-sugar making of a generation or two ago when the entire equipment was largely home-made and of the crudest kind.

It was twelve years ago, when ranching on a treeless, arid region of the West, that news came to us telling of a sugar-maple farm of our native community that was for sale. Memory quickly carried us back to the tree-covered hills and smiling, wooded valleys of our native county, and our purpose was at once formed to leave the monotony of sand and treeless prairie and again live among the charms of those undulating hills that were summer bowers of green, spreading maples.

True to description, we found our new farm home had a long eastern slope covered with something over one thousand sugar maples of tapping size and another cut-over timber tract growing thousands of sapling maples coming on to take the places of the old maple giants, some of which had diameters up to three and four feet. These huge old-timers, when beyond sap production, furnish much valuable furniture lumber, some of which are the prized bird's-eye and curly maple, while the rougher portions furnish the choicest of wood fuel to ward off all danger of fuel famine.

The tragic cause of this farm's being on the market was the owner's mistaking a bottle of poison for his favorite "booze." Naturally, under the management of a man of his habits the farm had suffered and its fertility was reduced, which enabled our buying the farm cheap. Fortunately for us the owner had taken a just pride in his sugar-maple orchard, and had recently put in a full modern equipment, including sap evaporator with fuel-conserving fire box and furnishings for syrup-making, sugaring-off, storage and gathering tanks, one thousand rustless covered buckets with spouts to match, also connecting pipes, siphons, skimmers, sugar molds, and various other sugar-camp equipment. Nor had he neglected to provide a weather-proof, roomy, comfortable camp building in which was ample space for storing all equipment and dry wood for fuel. In fact, we were overjoyed to find our highest hopes for maple-sugar making fully realized.

Then with what eagerness we kept our "weather eye" open for the first indication of the "breaking of the back of winter," which presaged the coming of the first run of sap. As the initiated well know, the first heavy run furnishes the highest maple products of the season. The sugar from the first run is the color of pure gold, and the first run syrup is a golden liquid. Thereafter there is a gradual decline in quality until the maple buds begin to swell. Then the sap takes on a ropy condition, which produces an unpleasant-flavored product.

When at length signs of the first run are unmistakable with the air softening, woodpeckers drumming, sap-suckers and nuthatches doing their trapeze antics, bluejays and crows calling their harsh love notes—then all is bustle and hasty action among the sugar-making crew. Four o'clock finds all astir, with the stock fed, cows milked, and breakfast finished in time to move on the sugar bush as dawn breaks. Deep-crusted snowbanks must be shoveled out, a roaring fire started under the evaporator with which to heat water for washing, scalding, and disinfecting all the buckets, tanks, and all containers which are to receive the sparkling sap as it gushes from the newly tapped trees. As the tapper completes his work the children's part is to hang the buckets on the spouts. As the procession of workers moves along they leave behind them a metallic patter of the sap rapidly dropping into the shining, spotless buckets.

Even before all the trees are tapped, teams are started with gathering tanks so that the fresh sap can be evaporated before it loses any of its high quality. The secret of a superlative quality maple product is to make the quickest possible change of the sap to sugar and syrup after it leaves the trees.

Boys and Girls Eager to Help

TEAMS are driven by boys and girls, the horses wading and plunging through the unbroken paths hauling the great sleds with tanks securely anchored to them, while the men with shoulder yokes struggle through the breaking crust with huge buckets of fresh, clear sap. When loaded, the teams move on to the camp with their sweet load. The stop cocks are opened, the sap rushes to the storage tank, being strained as it flows, then comes a second straining as it trickles in a constant stream into the evaporator under which a mighty fire leaps and roars. As the sap steadily loses its water, it passes by a siphon from one compartment of the evaporator to another from front to rear. When the last compartment is reached, the syrup stage has arrived, known by the foaming of its bubbles and the unmistakable maple incense that is given off in the vapor. But the modern maple-sugar maker uses no guesswork. When the hydrometer registers exactly 31 degrees the finished limpid maple syrup receives its last straining, and is drawn into syrup cans and hermetically sealed.

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The sugaring-off process completed

If maple sugar is the objective point, the evaporating is continued in a special sugaring-off container over a slow fire until the crystalline stage is reached, when it is poured into molds and becomes bricks of golden-white sugar, altogether different from the dark soot-dyed maple sugar of the open-kettle boiling of bygone days.

Thus goes the sugar-maple harvest of the modern maple-sugar makers until the season closes. Sometimes three, four, and occasionally five or six weeks of high-pressure and most exhausting labor continues, with merciful intervals for rest between sap runs. The sugar maker's camp knows no eight-hour day: sometimes sixteen and again twenty-four consecutive hours of active labor must be employed to keep up with the outpour of sap.

How are the products marketed? That is the simple and easy part of the maple-sugar industry of late years. Now it sells itself, and would were the supply multiplied many times. Our customers of other years in many States give us standing orders, and of necessity must often receive only a pro-rata allowance of the season's output. This year, customers could have easily been secured by thousands, and when once they use the pure sweets of the maple, thereafter they cannot be denied.

In the older days of maple-sugar making there was less haste and more pleasure. Then the maple-sugar season was something of a community festival in which there was general jollity and merrymaking successively carried from camp to camp.

This year has brought forcibly home to America what a loss has been suffered in the destruction of our forests of sugar maples. Great areas of rough, untillable hill land, steep slopes, and broken ravines that were formerly the native homes of the sugar maple could now be furnishing great quantities of the most palatable of sweets, and the mature trees beyond the best production would solve the fuel-shortage problem for innumerable homes that have been well-nigh fuelless.

Judged by our own experience, it will be of great future advantage to reforest large areas of the hilly, broken land with sugar maples and other valuable timber trees congenial to the sugar maple. Not all hill land grows the sugar maple successfully, but there are thousands of acres throughout eastern Ohio and States farther east and north that were once thickly set with sugar maples which never should have been cut. These rougher areas can be reforested and again be made more remunerative than they now are, as the source of the most delicious of sweets, valuable lumber, and the choicest of wood fuel. There will always be a demand for choice hard-wood fuel for burning in grates in the homes of the well-to-do at prices that will make the maple monarchs golden after death as in life.

Even though the war had carried off the able-bodied wood cutters, we found the past winter that a power wood-sawing outfit would convert our dead and failing maples into fuel which was in great demand.

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Guess who hangs the bucket after Dad inserts the spout

"In Steer and Gear and Stack"

[CONTINUED FROM PAGE 7]

The farmers of this country could carry the war to a victorious conclusion even if all the rest of the nation should quit. The rest will not quit, but we could win it without them if we had to do it.

The farmers of the United States can whip Germany. We can whip them with guns. We can whip them with our products. We can whip them with our money.

Every farmer in the United States must remember that the war has a first mortgage on every cent he has. The last spare cent in the pockets of every farmer in America should be devoted to the war.

The Kaiser began foreclosing his mortgage on our farms when he declared ruthless submarine warfare, and the war is our answer to his bill of foreclosure.

The Work for Us

Our contribution is, first, our sons and brothers for the trenches; second, the last pound of food products which we can grow by mobilizing our scanty labor-supply, utilizing the men, women, children, and the townspeople about us; and third, money for Liberty Bonds and War Saving Stamps.

This is the crucial year of the war. Our soldiers are at the front, hundreds of thousands of them in the trenches, and a million more ready to go. The whole burden of carrying on our own part in the war and of aiding our sister nations in arms rests on the United States Treasury.

If the Treasury fails or falters or finds itself unable to respond to every call upon it, the war is lost. Do you realize that? Your son and all the nation's sons are relying on the United States Treasury to furnish things with which they may fight. Their lives are lost if the Treasury fails. Our country is lost if the Treasury fails. Germany wins if the Treasury fails.

Therefore every cent you can rake and scrape together belongs to the Treasury, that our soldiers may come back to us alive and victorious. This is literally true. We can whip the Germans with our money, but not with the money in our pockets or bank accounts. It must go into the United States Treasury in subscriptions to Liberty Bonds and War Saving Stamps.

While Gerard was our ambassador in Berlin, the Kaiser said to him one day that he would stand no nonsense from America after the war.

Do you know what that means? It means that the Germans intend to subjugate this country if they come out of this war victorious.

Drunk with Egotism

The German Imperial Government has preached the superiority of Germany to all the rest of the world until the German nation is drunk with megalomania.

If the people of the United States should ever go insane enough to think such things of itself, it would be the duty of the rest of the world to crush the United States the moment it drew its sword and started out to establish itself on that superman basis. It would be its duty to crush us, not only for the sake of the world, but also for our own sakes.

Until this thing is crushed out of Germany, all the other nations of the earth will be looked upon by Junkerdom, as they now look upon us, as "servient elements" in the development of German Kultur.

Never since the Turks threatened to overwhelm Europe, perhaps not even then, was the world in such danger as now. Germany is not yet defeated. We must defeat her this year. Unless we win, our place in the world is lost, and our history as one of the "servient nations" begins.

We must withhold nothing from the support of the war. We must give our sons. We must bring forth food in abundance, multiplying our labor to that end. We must give into the Treasury of the United States every cent we can spare.

This summer the support of the war is up to the farmers—and Uncle Sam has never called upon the farmers in vain.

Weed Anti-Skid Chains

The Only Positive Safeguard Against Slipping and Skidding

Skidding is the greatest danger that besets the motorist. It comes without warning, turns pleasure into peril, and takes enormous toll in human lives and wrecked cars. Every day, some one, somewhere skids to his death.

Slipping and skidding are entirely due to a loss of traction. Perfect traction on muddy, slippery, greasy roads is impossible without Weed Chains. Wheels equipped with Weed Chains automatically lay their own traction; just the same as if a carpet of pebbles were laid in front of the tires. **With Weed Chains you get full service out of your car all the year 'round.** You can travel over any road no matter how muddy, icy, or slippery with perfect assurance of safety and comfort.

Prevent Accidents—Save Time and Money

Many lives have been lost; many cars have been damaged and wrecked; much time has been wasted because of foolish dependence on rubber alone. Rubber lacks the bite-and-hang-on ability to prevent slipping and skidding. No other device has ever been invented that takes the place of Weed Chains. All kinds of make-shift devices have been tried and all have been found worthless and useless. Weed Chains are the only traction device which can be absolutely relied upon at all times and under every road condition. So make safety yours. Take no chances. Equip your car with Weed Chains and thus prepare for accidents before they happen—not after.

Do Not Injure Tires Because They "Creep"

Weed Chains don't injure tires even as much as one little slip or skid because they "creep," that is they continually shift backwards around the tires and, therefore, do not come in contact with the tread at the same place at any two revolutions of the wheel. Made of the hardest steel, electrically welded and highly tempered; almost as smooth as glass and hard as a diamond without being brittle. They grip without grinding—hold without binding. No matter how muddy or slippery the road, they hold on like a bulldog—prevent side-skid and drive-slip. Sizes to fit all styles and makes of tires.

Don't wait till it rains. Stop at your dealer's today when the "going" is good and buy a set of Weed Chains for all four tires.

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are absolutely high grade in every respect, despite their low cost. The purest Para rubber and the strongest Sea Island cotton fabric enter into their manufacture. You get the low prices only because WE SELL DIRECT. We have no salesmen, no agencies. You pocket the saving. And remember this: If the tire does not live up to its guarantee, you get full credit for unexpired mileage and we pay express both ways. Write for prices and free illustrated booklet. 20

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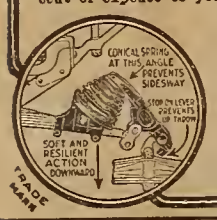

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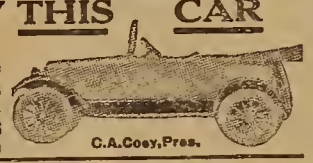

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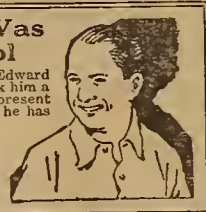
Last Spring He Was Teaching School



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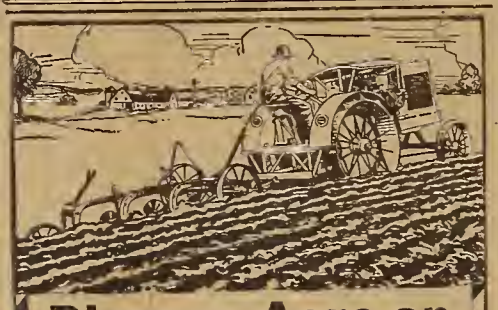

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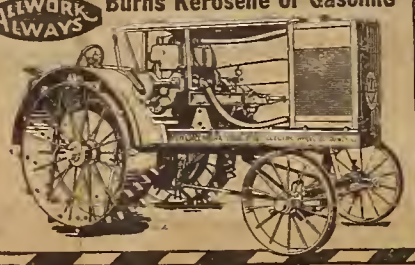


More Tire Mileage

By W. V. Relma

IF IT were not for the pneumatic tires, present-day automobiles would be impossible. Take away the inflated tire, leaving only the solid rubber or iron, and it would be impossible to attain what most persons consider an average driving speed. The jolts at 20 miles an hour would almost throw the passengers out of the car, and if the motor and other vitals had to absorb the sledge-hammer shocks, its life would be very short.

In reality, automobiles roll about on cushions of air, and the most satisfactory way that has yet been found is confining the air in rubber tubes or tires, and in return for the added life to the entire machine, in return for the comfortable, jarless rides, the most that a tire needs is plenty of air.

Air is the food and nourishment of tires. When a tire is underinflated there is a constant bending and flexing of the walls of the tire to a greater degree than it was built to stand, and it generates a great amount of heat. The rubber and fabric begin to pull apart and a stone bruise is easily acquired, and a blow-out may result.

One cannot be certain of the proper inflation without using a reliable tire gauge. An underinflation of 20 pounds can hardly be detected by the eye. The driver should be prepared to carry any load that is proper. For instance, the rear tires upon a touring car may appear to be properly inflated, but with a load of three people in the back seat, and possibly some extra baggage, the resulting load of several hundred pounds causes a noticeable spreading of the tire walls and consequent wear upon the casings.

The use of chains should not continue longer than is absolutely necessary. If too loose they will cut and injure the casings, and if too tight they will cause an equal amount of trouble. Chains are an absolute necessity when driving through snow and other conditions of poor traction.

A tire can often be used longer with safety by changing from rear to front, where the wear is not so severe. Many tires are junked before their time because neglected cuts develop into blow-outs. If extra casings are carried it is wise to put them in service from time to time, as they deteriorate from non-use. Keeping tires clean enables the driver to detect the cuts more easily.

Faulty wheel alignment is very injurious to the tires. A new casing can be practically worn out in a few days' service. The front wheel should "toe in" about three-eighths of an inch. Where a driver guides his car affects tire wear. Following the ruts makes the tires liable to worn side walls, and also to cuts and stone bruises due to sharp stones directly in the path of the wheels.

Excessive wear upon the rear tire of one wheel will usually indicate that the brakes are not equally adjusted. Running in car tracks will cause wear upon the side walls and may result in punctures, due to picking up small slivers of metal. The sharp edges of a frog are liable to cause a bad cut. Frequently the pavement abutting the car track is very rough and dangerous.

Many people do not realize how injurious oil is to rubber, and let the car stand night after night in a pool of grease or oil. The garage should be provided with some sort of a shallow pan long enough to reach any part of the chassis from which oil or grease is likely to drop.

In repairing very small punctures a small patch can be applied. First clean the space around the puncture, scrubbing with a wire brush or emery cloth to remove the soapstone and create a rougher surface for the patch to adhere to. The patch may be a pinch of tire putty, a cementless patch, a fabric back patch, or it may be vulcanized at the convenience of the operator. The driver should experiment with all kinds, and select the type that suits his needs best. Of course it is well to remember that cement patches do not stick so well in the summertime. Cuts in a casing should be repaired by cleaning thoroughly with gasoline and a stiff brush. Then apply a coat of cement and let dry. Apply another coat and let dry, then put in the required amount of rubber putty, and trim practically level with the casing proper. Many drivers like to vulcanize their own tubes and casings, and many different kinds of outfits are sold for this purpose which will do good work if the instructions are carefully followed.

The amateur cannot do much work on the casings that will be satisfactory without a great deal of trouble. This class of work should be turned over to a competent repair man. If it is worth doing at all it is worth doing right.

The driver should carry with him enough of the right material and parts to care for any ordinary tire troubles that might arise. An extra valve stem or two should be carried, as an accident to a stem may render useless a perfectly good inner tube. Installing a new stem is very simple. Remove the nut and washer that hold the stem to the tube at the base of the stem, and carefully pull the stem out by working it at an angle.

Blow-out patches, extra tubes protected from contact with other articles, patching equipment, valve insides, valve caps, and dust caps for the outside of the valve stem should be carried; also a good pump and a good jack. Frequently a good pump will not work well because it has been allowed to remain in the tool box too long without being used. The leather washer upon the inside of the pump has become dry, and will allow the air to escape instead of going into the tube. Often oil poured down the plunger stem will soften the washer enough to permit the inflation to proceed.

There have been hundreds of things invented for prolonging tire life and preventing punctures. One is the inner liner. This is a strip of several layers of fabric which is placed upon the inside of the tire to strengthen the walls and give extra wear.

There are double-tread tires which are made by sewing or vulcanizing one casing on top of another, so that the wear surface is renewed. A great many people have found these satisfactory, especially in the wintertime. These tires are practically puncture-proof. There is also an all-rubber inner liner made that will make the tires practically puncture-proof, and there is one of leather that performs the same duty. There are leather steel-studded treads that fasten over the outside of the casings which are used successfully, especially in mud.

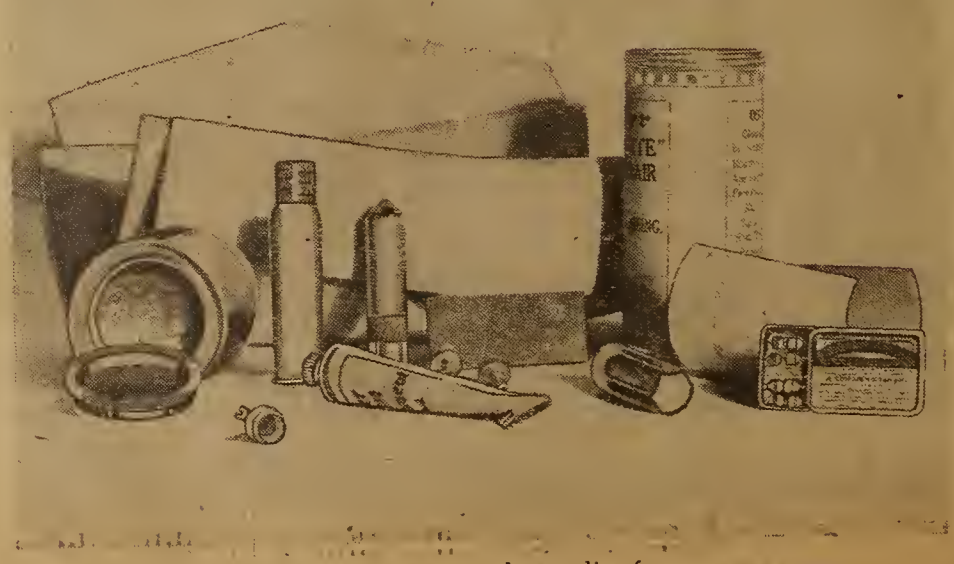
There is a tube made in a manner somewhat similar to a casing which is declared to be puncture-proof. A tire-filler preparation is made which consists of round sections of spongy rubber the shape of the inside of the casings.

Several types of puncture-proof tires are manufactured. One type depends largely upon overlapping metal disks which are formed in the casing between the outer tread and the inside fabric. Another type is simply a tire with bridges of solid rubber at regular intervals which hold the tire up full and round as if fully inflated. Then there are several kinds of cushion tires that are practically solid rubber with regularly formed holes in them.

A great many drivers use cord tires. These are quite different in construction from the ordinary casing. The usual tire is made of several layers of fabric to the tread. The cord tire, as the name implies, is built up of several layers of cord. These layers are at different angles, so as to obtain a maximum amount of resistance to road stress. The construction of these tires makes them practically stone-bruise proof.

Truck tires require comparatively little attention. They are largely abused by overloading and speeding. Fast driving generates a destructive amount of heat that soon causes the tire to deteriorate. Practically the same rules that apply to pneumatics also apply to the use of solid truck tires, so far as driving is considered. Satisfactory service from tires depends largely upon getting good tires, and driving them carefully, no matter what the type.

From left to right the tires show the effect of good care, improper braking, underinflation



The repair kit should contain ample supplies for any emergency

Automobiles

A Little Hint on Car-Buying

By C. E. Gouveia

AUTOMOBILE prospects make serious mistakes by admiring the dressy part of a car instead of what that car will do. It's not altogether the engine in a car that makes a car.

Some men when they see non-skid on both front and rear tires think they get more service. That is untrue. The wind shield is another thing to notice. If the car you intend to buy has a wind shield slanting toward the rear, it's all right. A wind shield directly straight up and down is a menace in rain or snowy weather because it fails to keep your glass clean.

It is foolish for men to buy cars just because they are good enough to make a certain hill on "high." In the first place, it does no car any good to race to make a hill on high. Put it on second if you are in doubt, and you will play safe.

Last, but not least, is the idea that your car, just because the agent told you it could make 40 or 55 miles an hour, is sufficient for that speed. That's a serious mistake to try out. If your car is a light-weight car, never try speed, because you are only flirting with death. It's not logical for a light-weight car to stick to the road, and it won't.

An Odd Garage

By J. L. Graff

HERE is a picture of an old windmill tower transformed into a private garage on a country estate. The wind-catching machinery had long been in disuse, and was removed. Then the

Slight remodeling made this old structure give modern service

lower apartment was prepared to shelter an automobile. A room up-stairs was fixed up for the driver of the car.

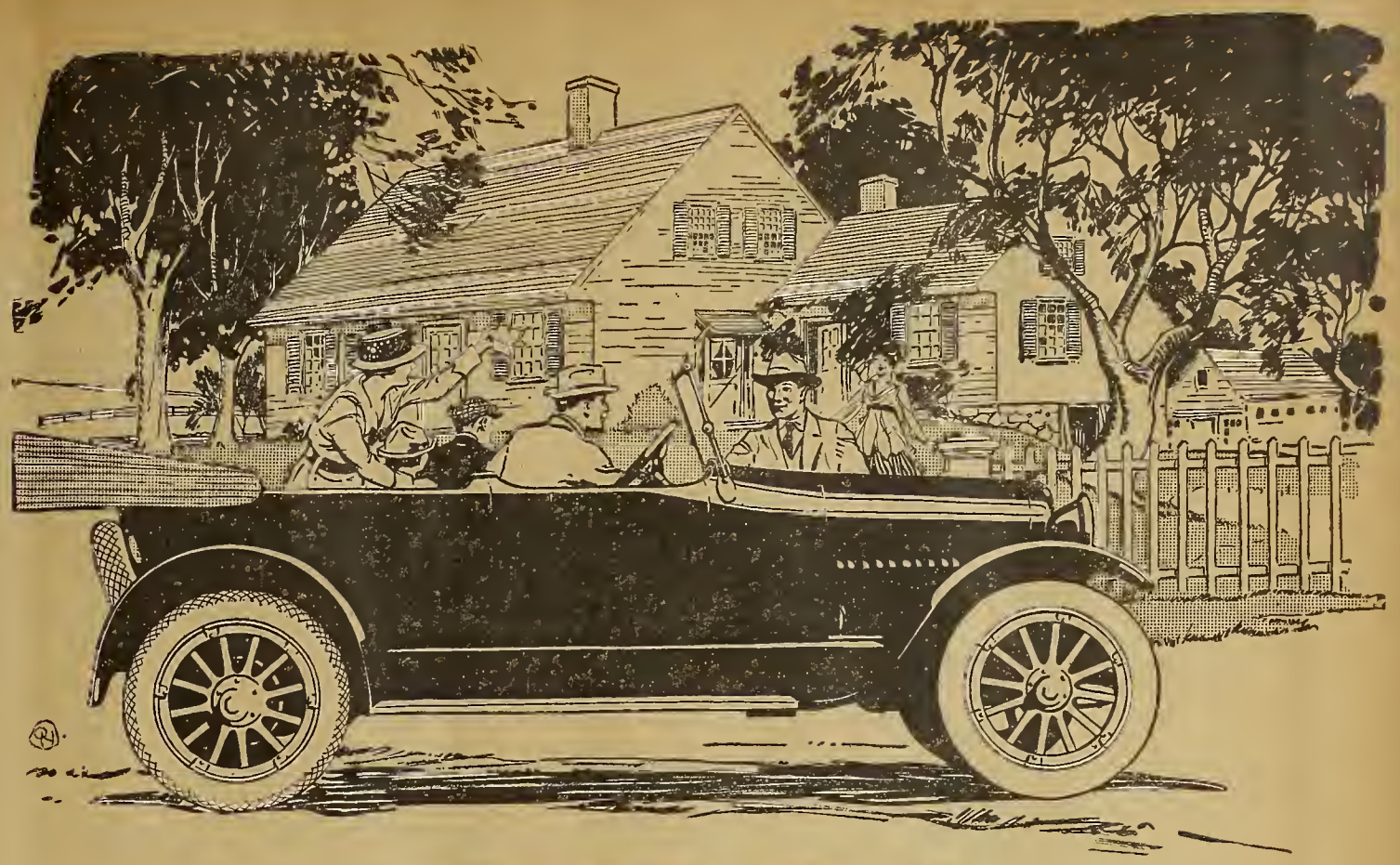
In summer, vines climb up one side of the structure and spread over and hang down from the top platform. An ornamental trellis is built over the entrance, and this also is intended to support vines, and thus add to the general attractiveness. It is located near Chicago.

Simple Crank-Case Repair

By W. V. Relma

LAST year while I was driving in the country a heavy stone was turned up by the front tire and cracked a small place in the crank case of my car. This caused such an oil leak that I could not proceed upon my journey. Still I did not want to tear the motor down to have it welded, as would have been done under ordinary circumstances.

I was able to repair it very quickly, however, by drilling a hole at the center of the crack which would take a ⅜-inch bolt. Then I reinforced the crank case on the inside and on the outside with small pieces of iron held together by the ⅜-inch bolt and a small gasket of felt coated with shellac.



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So, by all means, get a motor car—for yourself and Uncle Sam. *Any* car is better than a slow, plodding, horse-drawn vehicle, but common sense will dictate the wisdom of buying a good one while you are about it.

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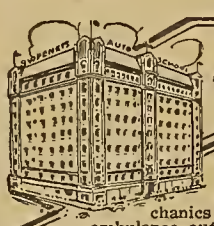

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Automobiles

Repairing Blow-Outs

By J. L. Justice

IN MY experience it seldom pays to have blow-outs repaired when the fabric has been torn open more than two inches. One that cost $4 to have repaired ran just nine miles. Another costing $3 ran a little over 200 miles, and others cost from two to four cents a mile for the mileage they made. This was not the fault of the tires themselves, for all of them were standard-made tires which had run more than their guaranteed mileage.

The most effective plan we have for obtaining the most mileage from tires is to put innerliners in them when they appear to be about worn out or on the point of breaking. We make these innerliners from old discarded casings. Much of the fabric material in such tires is pretty substantial when kept in a dry place.

The fabric is stripped from the rubber, the beading cut off, and the edges tapered. This fabric innerliner is inserted in a weak tire or in one which has a blow-out. This fabric should not be cut in two, but left in one continuous piece so that there will be no danger of its slipping.

It is a good plan to strip the fabric out of two or three casings and keep several such innerliners in the car. One of these came in very handy last August when we were quite a distance from home and a town. One of the innerliners was put in over a blow-out, and that tire is still in service, having run eight months, and it has not been removed once since.

It takes some little time to place the fabric in the first time, so it is well to put it in during leisure moments at home before the casing has become ruptured. We have used about six or seven of these home-made innerliners and have not yet had a puncture through them. The edges of the fabric must be tapered to prevent the inner tube from being pinched.

Safeguarding the Springs

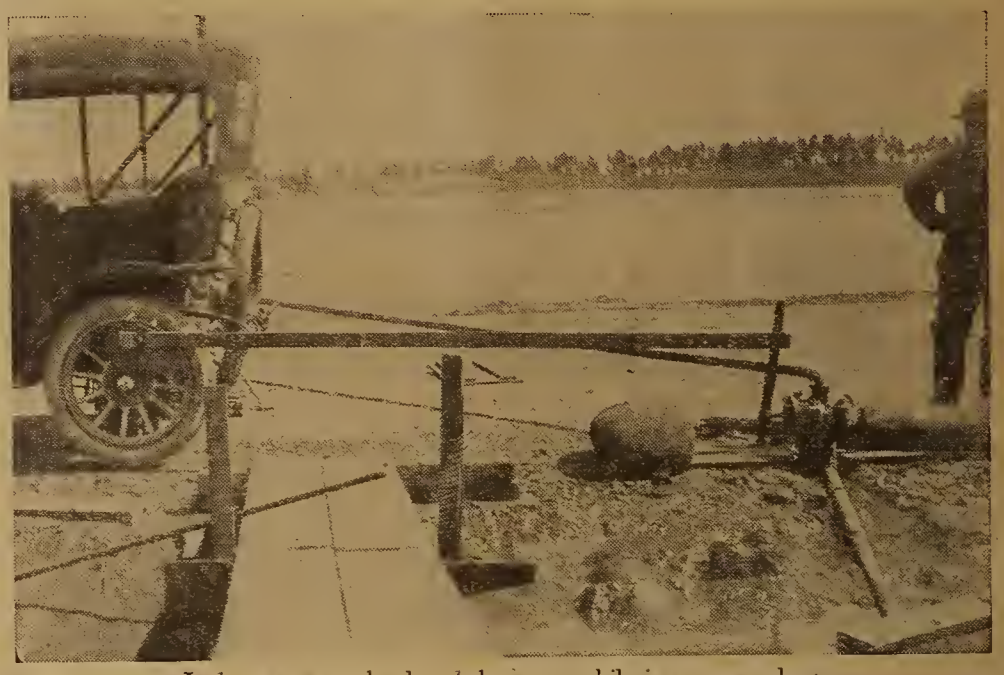
By B. H. Wike

THERE are all kinds of devices on the market for autoists to use in their attention to the springs of their cars. Some of these are worthy and useful, but for the most part the owner himself is the one who needs some sort of a contrivance to his mind in the way of good, sound advice on the subject of springs. There are many cases where shock absorbers do a great amount of good in conserving spring life as well as adding much to the comfort of riding. Rebound straps are also good, and have saved many a spring from breaking.

Not every squeak you hear on the car is traceable to the springs, for some of them at least come from loose body joints. On account of the squeak, which supposedly comes from the springs, it has become a practice to pry apart the leaves to insert some lubricant. This is bad practice, for if something is desired to be done it would be far better to take the spring apart and place regular spring fiber between the leaves. Driving in wedges to assist in the insertion of grease strains the leaves more than one would imagine, and so favors breaks. The spring clips must be kept tight too.

Nearly everyone is familiar with the principles of the catapult or slingshot. The automobile spring will act similarly when the wheels strike crossings, ridges, etc., at a fast speed. There is many a case on record of occupants in the rear seat being shot out of the car, when the top was down, by the violent action of the rear springs which sent them skyward when the driver had no regard for rocks, bumps, or other rough places. At such times the power of the spring is surprising and dangerous unless some means or consideration is used to safeguard against the catapulting action.

The best remedy I know of, and the only one I have ever applied in experience to lengthen the life of springs, is careful driving. The road is watched far enough ahead to allow the speed to be reduced sufficiently to pass over bad places with a "rolling" motion, which does no damage to anything. By depressing the clutch pedal a few feet from the crossing when the car's speed is



Jack up a rear wheel and the automobile is a power plant

Enamel vs. Nickel Plate

By C. E. Williams

TWO years ago one manufacturer of motorcycles put out a service model motorcycle. This differed from the regular model only in the finish. In place of the bright nickel plate of handle bars, spokes, etc., was a practically indestructible black enamel. Best of all, it was absolutely rust-proof. In the 18,000 miles I rode my machine in the first year and a half I owned it, this finish remained first-class, and this through all weathers, from zero to 95 degrees temperature, from driving rain to six inches of snow. I never tackled anything deeper than six inches.

The black enamel on the spokes seemed to have the effect of keeping the nipples from unscrewing and thus loosening the spokes.

Doubtless, any motorcycle manufacturer will furnish the enamel finish in place of the nickel plate on request when ordering. For the man who uses his machine for pleasure only, I would not recommend it, for there is something very attractive in the flash of nickel in the sun, but for the man who rides every day in all weathers, and whose machine must stand out subject to the elements, the black service finish is a blessing.

If the rider has a new shiny nickel plate finish on handle bars, spokes, etc., and is obliged to use his motor in bad weather, a coating of vaseline over the nickel plate will keep it from rusting. When the season of bad riding is over, the vaseline may be wiped off, leaving the nickel in first-class condition.

about 12 miles an hour, the car rolls over with a free engine.

Another way to accomplish this feat without using the clutch is to reduce speed far enough away if on level ground stretches and retard the spark to the limit on the passage over. Never attempt the latter feature when taking railroad crossings, for then the sensible thing is to reduce or change to a lower gear in time to make a safe passage possible without stalling. Not only does such a plan prevent many accidents and save life, but surely it also saves the springs.

Painting Our Car

By L. J. Jennings

PAINTING your own motor car may seem like a thankless task to many, and while somewhat of an undertaking it may be accomplished in a short while if the whole family buckles into the work. The actual painting is the smallest part of the work. It is cleaning the car and getting it ready for the paint that requires the most work.

Last year we painted our five-passenger car which was purchased new in 1913. It was the first time it had been repainted, and no doubt the task would have been much easier had it been done a year earlier. We did it near the latter part of May because the weather was warm and there was not much dust in the air.

The tools required were putty knives for scraping off old paint where necessary, thin-bladed case knives, steel wool for removing rust and paint, and sandpaper.

First we took the car apart, removing the top, mud guards and fenders from the body, and the body from the chassis. The body was put on a pair of trusses in the garage, and the chassis pushed outside to clean. The fenders and mud guards were taken apart so that every particle of rust could be removed. It is useless to try to make paint stick long to a rusted surface, and once begun it pays to do a thorough job.

The fenders and wheels were the only parts that had any water used in cleaning; all the rest was dry cleaned. These were first washed with automobile soap, then with clean water, and allowed to dry. The knives and steel wool were used to remove the rust and chipped paint, after which the surfaces were smoothed down first with coarse and then with fine sandpaper. The grease about the wheels was cut with gasoline and picked out of the corners with the point of a knife.

The Paint on Chassis

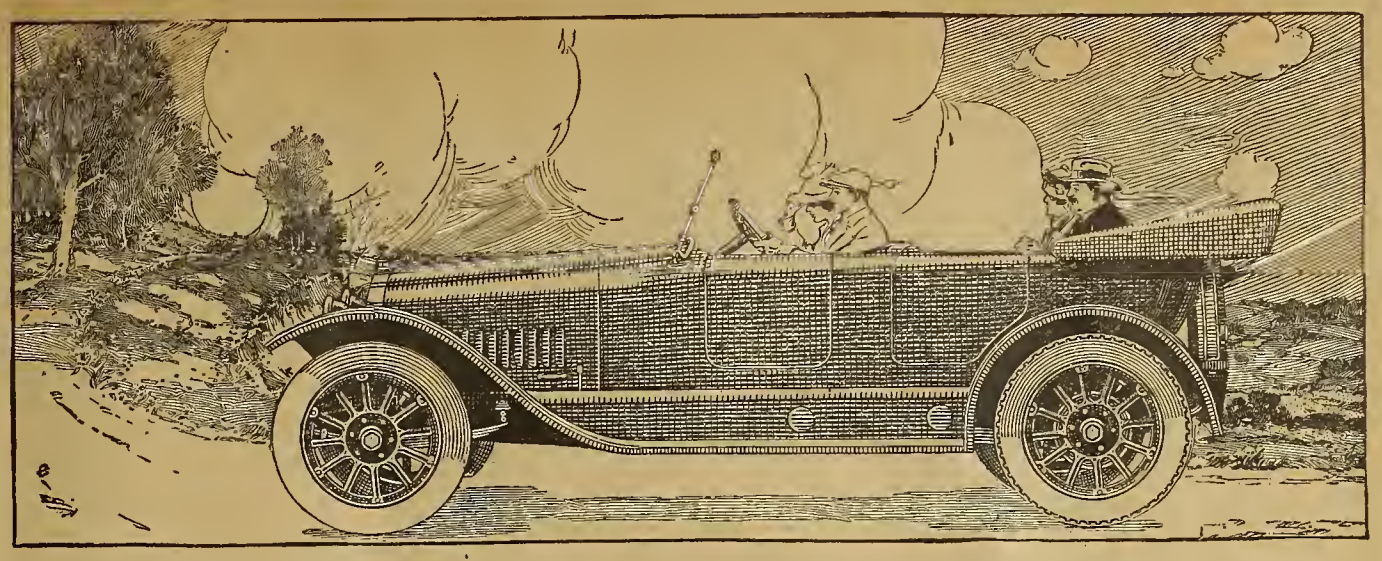
Where the paint on the chassis was firm and in good condition it was left, but was rubbed thoroughly with the steel wool and sandpaper.

The body was cleaned in a somewhat similar manner except that all the paint was removed with the blades of flat knives. This was the most laborious part of the work. The surface was rubbed firmly with the steel wool until it took on a shiny finish, then sandpepered, and rubbed clean with a dry cloth. It took practically two days to clean the car. When this was done the car was ready to paint.

We used the same colors of paint that were on the car originally, gray for the chassis and black for the body. We thought it would be less difficult to make a presentable job than if different colors were used. One reason for our success, I think, was due to the fact that we used the best automobile paint to be obtained. Good paint has a guarantee of service behind it, and is the cheapest in the end.

The first coat was rubbed on thoroughly, and allowed to harden about four days. It was very hard and dry when the second coat was applied. As the weather was clear and warm, it hardened quickly. When the second coat had dried there was not much gloss to it, but it had covered up smoothly all the scratches and inequalities of the body. A third coat was applied to the chassis, fenders, and mud guards. Wherever a tap was removed the threads were daubed with paint before putting on the tap to hold it tight.

About four days after the painting was all done the entire car was given two coats of a high-grade varnish. This gave it a fine glossy appearance which has helped greatly in preserving the paint and retaining the sheen.



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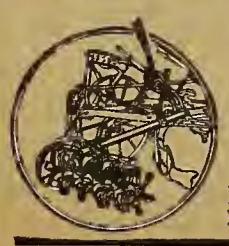

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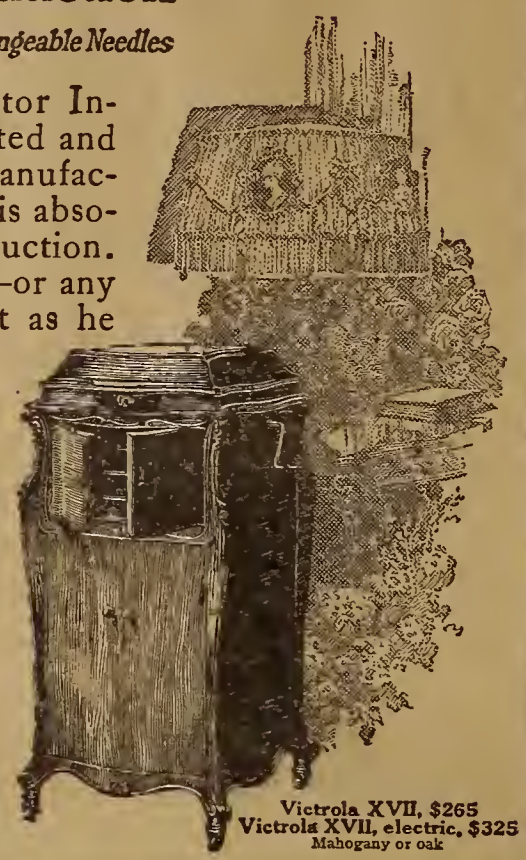

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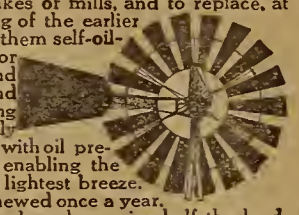

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Automobiles

Emergency Gas Can

By Earl Rogers

DID you ever have the engine of your car die down when you were about three miles from a gas supply and find that the tank was empty?

I have been caught twice in the last couple of years, and now I have a gallon can of gasoline in reserve. It makes me feel safe all the time, and saves time when I am in a hurry. If I know there is a gallon or so in the main tank I will go on a short trip without stopping to fill up before I start if I am in a hurry. I know the reserve can will help me get home again if I need it.

I have helped out other motorists with my gallon can too. They were caught on the road and I happened along.

I used to run a motorcycle and carried a little bottle of "gas" in the tool chest. It didn't hold more than a good tincupful, but that was enough for several miles. It saved me walks enough times more than to pay for the bother it took to have it along.

Ever forget to put extra oil in the crank case before you started on a trip? I have, and since then I carry a reserve can of cylinder oil all the time. It's cheaper than burned bearings, and much less bother.

A Fire-Proof Garage

By S. C. Burt

HENRY J. STILLING, McHenry County, Illinois, is the owner of this rather unusual garage. No wood has been used in its construction, save for the doors, which are of the sliding and folding type.

Concrete blocks have been utilized for three sides of the structure, while the

This two-car garage cost $300

roof also has been fashioned of cement. The rounded lines of the latter lend a unique appearance which is rather pleasing to the eye.

Considerable difficulty, however, was experienced in constructing the roof, and small cracks therein have begun to develop. The structure, which cost about $300 to build, will hold two cars and is practically fire-proof.

Removing a Knock

By Ed Henry

SOMETIMES an automobile will be running along serenely when suddenly it develops a knock with each revolution of the rear wheels, which sounds to the car's occupants more like a bump. If the driver has never had such an experience he is likely to be alarmed and start an instant investigation. To the inexperienced a knock of this kind is not easy to locate, but if the car is one that has been used much the differential should be suspected. If caused by a piece of steel lodging between the cogs or gear, jacking up and turning the rear wheel slowly will locate it, if at any point it seems to catch or bind.

An owner following an experience of this kind had taken his automobile to a garage, where the entire rear construction was taken down to remove a small piece of steel that had chipped off a differential gear and lodged between the

teeth of one of the cogs. Each revolution, as it came between the pinion and the large gear wheel, caused the familiar bump or knock. This was a rather expensive job to remove so small an offender, so when it happened again, instead of running his bumping car to the garage, this farmer stopped as soon as it occurred and devised a method of removal of his own.

First removing the cover plate over the hand hole in the differential housing, he jacked up the rear wheel and had a helper carefully turn it slowly until he had located the lodged piece of steel by feeling along the teeth of the cogs with a screw driver; then with the aid of a pair of pliers he carefully removed it. Making sure there were no others, he

Her first lesson

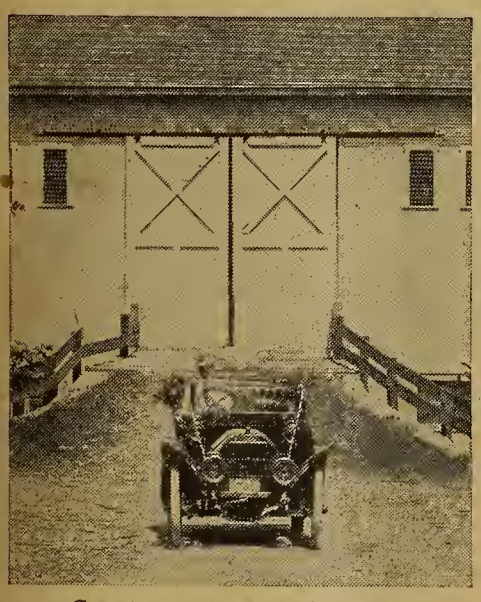
replaced the hand-hole cover, and was soon on his way again, with the knock entirely removed.

After an automobile has seen much service, pieces of the differential gears are likely to chip off and get between the cogs. This is usually due to the natural wear, or sometimes to unusual strains. Though the gears are still capable of giving much satisfactory service and need not be replaced, yet a knock of this kind is wracking to other parts and also annoying to the careful driver. It is therefore desirable that the chip be removed as soon as possible.

One owner, who drives an old model machine without even a hand hole in the differential housing, uses a screw driver through the plug hole for injecting grease into the differential case, to push the lodged pieces of steel out of the cogs, after which they fall to the bottom of the housing, where they stay and give no further trouble. Later they are removed when convenient.

Tire Saving

HEAT is a deadly foe to solid or inflated tires. If your garage has large windows where the sun can get at the wheels, put up curtains. In speeding, it permits in a solid tire rapid displacement that softens it, resulting in wear and tear. Drivers should wake up to the fact that their truck will stop

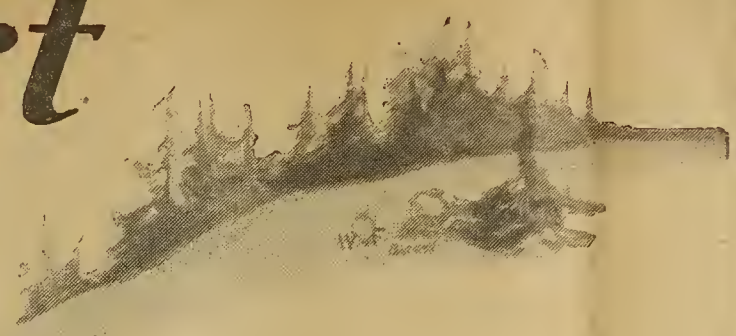


Starting on an errand to town

just as quickly by gradually applying the brakes as by putting them on abruptly.

Another thing to avoid is quick turning on paved or rough corners. If one brake takes hold a little sooner than the other, it causes a flat spot on the tire. This spot will wear more than any other place on the tire.

The Comfort Car



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The remarkably easy starting of this new Hupmobile is by no means the least of its comforts.

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Camouflage

THIS is not a rainfall map of Minnesota. It is a French train of cars on which a machine gun is mounted, so carefully camouflaged that it cannot be distinguished from its background at any distance. The colorings of nature are formed by spots and stripes of various colors which at a distance blend and give the general impression of brown, or green, or blue. By copying these combinations military artists have been able to make an object blend into its background so that it is almost indistinguishable.

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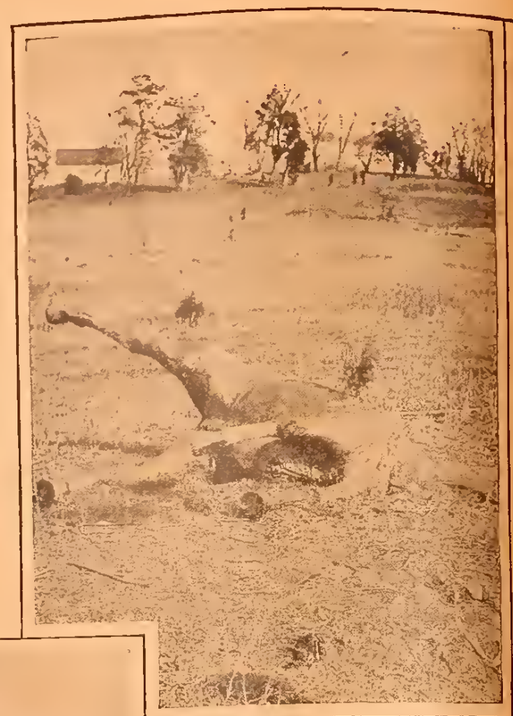

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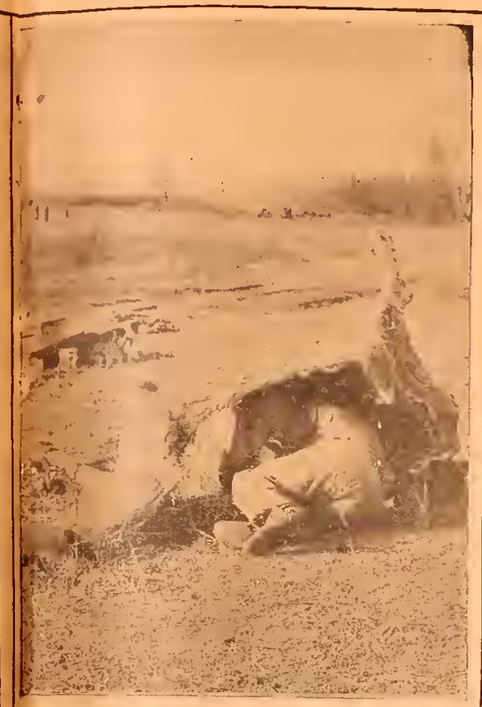
Photograph from Underwood & Underwood, N. Y.

DEAD horses are one of the commonest sights of the battle-ridden areas, but their position, together with that of all other sizable objects out in No Man's Land, the observers on both sides know by heart.



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Photograph from Underwood & Underwood, N. Y.

ONE dark night some Americans replaced a real dead horse lying between the trenches with one they had painstakingly manufactured in its image. To the enemy's eyes the horse was just the same one they had been looking at for several days. What our forces saw this picture shows—an American engineer.

YOU would never think that you could be looking right at anything so huge and cumbersome as a tank and not see it, would you? Yet these French tanks, photographed while crossing a wood at the Aisne front during battle, are so painted with irregular splotches of color that they blend irrecognizably into the background. The enemy does not realize that they are coming until they are perilously close.

Photograph from Underwood & Underwood, N. Y.

THIS big clock, sitting innocently among the ruins of a wrecked church, apparently fell to its present position when the tower was demolished at eleven and a half minutes past four. In reality it was painted here by the enemy, and conceals a machine gun.

Photograph from International Film Service

THERE are just two rocks in this picture, each one to the ordinary eye quite as innocuous as the other. But the one on the left is a hollow contrivance of plaster with peep holes for observation purposes. In a pit beneath a man watches the enemy trenches with an eagle eye.

Copyright by Committee on Public Information
Photograph from Brown Brothers

CLOSE up, this looks as though some soldier, weary of the ugly wall of this shed, had amused himself by painting on it one of the scenes from the home farm. The watchful enemy, however, sees only a pleasant grove and in the foreground a hen mothering her brood. He does not suspect that the peaceful scene masks a shed.

Photograph from Brown Brothers

Copyright by Underwood & Underwood, N. Y.

THIS cow will never win a blue ribbon at a county fair, for she is not even "skin and bones." The camouflage man has created her of wood and painted cloth, and set her to graze on a camouflage meadow which is real enough. A roof concealing a battery. The bough background and the painted roof give the enemy air observer only the suggestion of a peaceful country scene.

Photograph by International Film Service

THIS American pilot feels a lot safer in this gray-spotted machine than he would in one of a plain, sober color. As he flies over German territory he is as hard to find as the missing man in the picture puzzle.

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THE EVERLASTIC SYSTEM OF ROOFINGS offers an attractive, durable, and *economical* roof for any type of steep-roofed building, whether it be your home, barn, garage, silo, chicken-house or shed.

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No better value can be had in ready roofings than the Everlastic System offers. Below are a few points about each style.

Everlastic Multi-Shingles

Made of high-grade felt, thoroughly waterproofed and *surfaced with crushed slate* in natural colors, either red or green. Laid in strips of *four shingles in one* at far less cost in labor and time than for wooden shingles. Gives you a roof of unusual artistic beauty that resists fire and weather.

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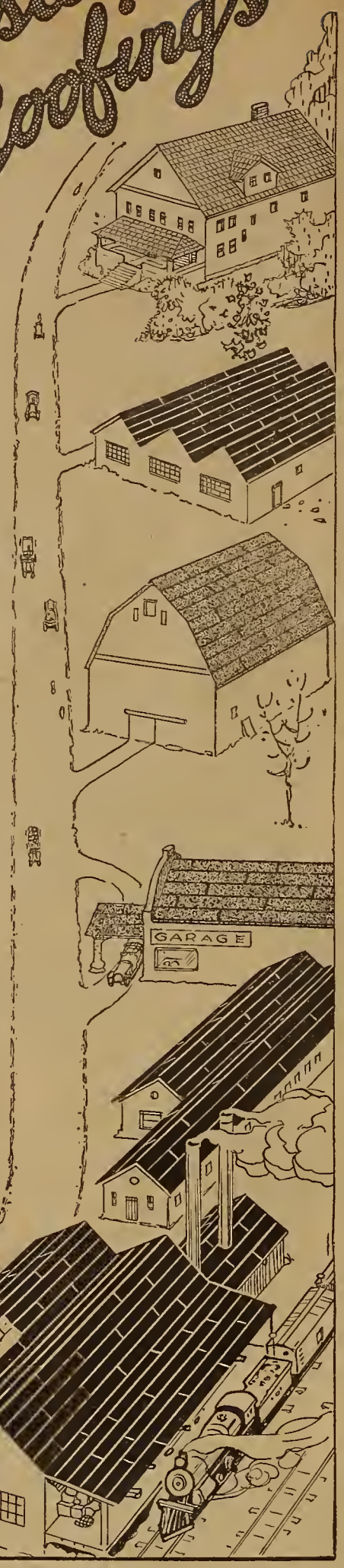

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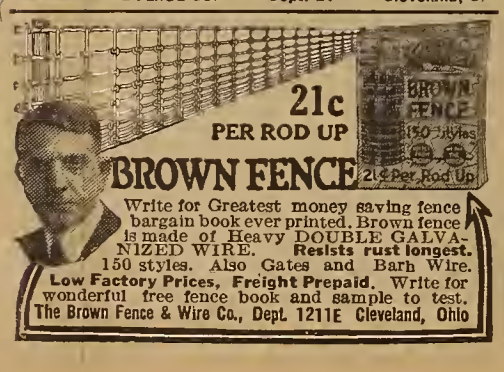

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Building

Hints on Electric Wiring

By William E. Curley

WHEN wiring your home for electric lights, whether a new house or one not so new, bear the following points in mind; they are offered as a result of a good many years' experience around a variety of real homes:

Have the lights of your main rooms controlled by switches placed conveniently at the doorways. Take the dining-room, for instance. If it is usually approached from the kitchen, put the switch at the door to the kitchen. The library lights should be controlled by a switch from the hall door.

A very ingenious arrangement of switches is possible for hall-lighting. Just inside the front door is placed a double switch. Pressing one button will light the first-floor hall light. Pressing the button beside it will light the second-floor hall light. You can go up-stairs leaving the light below burning and turn it off from a switch on second floor, while the second-floor hall light can be turned off from either first or second floor switch as well Reversing the operation, it is possible to turn on both second and first floor lights from up-stairs and turn off both from the switch at the front door.

This arrangement costs a little more than plain one-switch wiring, but it is surely worth the difference in the added convenience.

If your home was not originally wired for lights, do not think it an impossible job to get a decent-looking installation. The day of the exposed wiring run in molding on the walls and ceiling is past. Practically as good a job of concealed wiring can now be done in an old house as if the wiring were run when the house was constructed, and without cutting the plaster too. It means to take up and replace a strip of flooring here and there, and a little trouble fishing the wires through, but it can be done, and done reasonably. Any good electric contractor can take your old house, put the fixtures exactly where you wish them, conceal the wiring, and when he is through you will hardly know he has been in the house.

And don't forget the closets! Every closet of any size—and the small ones too, if they are situated in dark corners—should have a light. How many fires have been started by lighting matches in dark closets! While almost invariably overlooked, the problem of closet-lighting is one of the most important points to consider in wiring.

The owner of these buildings believes they have increased the value of his farm more than 50 per cent

When Eyes are Opened

EVERYBODY noticed the place of a certain farmer when passing his home. He was a money-maker from the word go, owned a large farm, plenty of fattening stock, and was altogether very prosperous. His large house and barn and the surrounding grounds were what caught the eye. I could hardly believe that any man with so much ambition and success at farming allowed such a state of dilapidation as was presented there.

When the busy season passed and the new year fairly opened, I chanced to pass the place, and such a change had taken place as if some genius had suddenly transformed it. The house and barn had both received the first coat of paint for many a day, and ragged roofs had been replaced with new ones.

A fence along the road was retained on account of stock being occasionally at large on the public road, and it was now not the ragged picket fence of old, but the latest yet not expensive type of woven wire, with splendid gates to match. Posts at other gates that had leaned from being too loose or rotted were replaced with fresh ones that were now straight and solid, and gates that had swayed and dragged did not do so any more, on account of being well reinforced and fixed for service.

The henhouse had been reconstructed and whitewashed. All the farm tools had a shed where they stood clean and ready for the opening of another season. Before this it had been somewhat of a custom to let the implements take the open weather wherever they happened to be left after the work was done.

Hog pens were not now so near the house. Scrap piles had been removed and sold, and the boys of the place got some extra change for their trouble.

And the result of all this improvement? This farmer feels that it increased the value of his farm over 50 per cent, anyway. He had put it off too long, he said, for it cost more after so long a delay; but the getting at it, making the start, was the greatest task.

Anyone else could have done the same, provided he had had the determination. The house, barn, and their accompanying buildings are like jewels—if the setting or surroundings are bad the jewel itself can't help looking bad, and the whole thing doesn't look very valuable.

The wonder of this case is that this man's views became critical enough to take on a strong desire to act, to make the needed changes which now mean so much to him and his family, and are a positive delight to outsiders.

To Mend Splintered Handle

WOOD glue proves exceedingly handy when it comes to mending the splintered handle. The holding powers of such glue are remarkable, and if kept away from water will retain its strength for a relatively long time.

Smear all parts of the fractured handle with the glue, draw the parts closely together, and hold in position with a cord or leather strap. After several hours the glue will be perfectly dry. It will be found upon experimenting that the mended portion has practically as much strength as had the original handle. Any little slivers may be removed with a wood rasp.

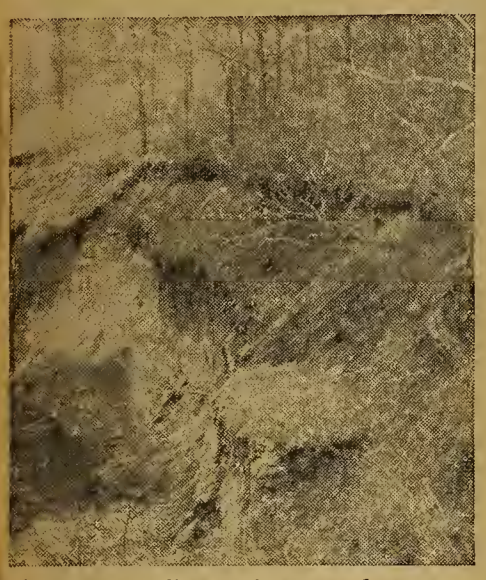
Crops and Soils

Timber for War Purposes

By W. L. Nelson

IF YOU own a grove of walnut trees beware of the man who comes to your place purporting to be armed with government authority to take over the timber for war purposes. He may be trying to steal your trees or to get valuable timber for much less than it is worth.

Several weeks ago a representative of a firm which uses large quantities of walnut timber, especially in the manu-



How large gullies and ravines first start

facture of gunstocks, went to the owner of one of the finest farms in the Middle West and led him to believe, if he did not actually so state in so many words, that he had authority to requisition timber for war purposes. The trees in question are in the front lawn of this farm.

The present owner of the place, while not lacking in patriotism, greatly regretted to give up the trees which his grandfather and father had carefully protected. A letter was written to an official in Washington. The answer was to the effect that while the Government was in need of walnut timber it was not taking trees by force. Information was also to the effect that an officer, together with the buyer of the logs in question, would soon visit the farm, and that matters would be equitably adjusted. The result of the visit was that the owner of the farm saved his prized trees, and that others

Tree safety by the cement route

in the same county received from 300 to 400 per cent more for timber than they had been led to believe that "the Government" would allow. Unfortunately, a few landowners had already delivered the logs which the buyer had bargained for, so did not get full value. In one case a row of fine trees, marking the boundary of a farm and planted sixty years ago, were cut down under the impression that they were to go to the Government and that only a nominal sum would be allowed the owner. Upon learning the truth, the owner declined to sell to the buyer who had deceived him, even when offered the market value. The logs very properly were sold to another firm. If this scheme is being practiced elsewhere, it is well for owners of timber to be on guard.

Enlist Your Ford Your Country Needs It

Increased food production is the crying need of the country. More corn, wheat, oats, rye, barley—more land under cultivation—more productive labor from horses, machinery and the men on the farms. Efficiency and greater output are not only patriotic duties, but they insure increased profits. And the

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stands today as the farmers' first and strongest ally in the battle for food supremacy. *Put that Ford to work.* Remember you have two-thirds of a tractor already in your car. A Staude completes the job and does double the work. It releases 20 acres for food for men that otherwise go to feed that four-horse team.

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More Work—Less Cost

It does continuously—24 hours a day if necessary—the work of four horses at the cost of feeding one. It plows an acre with less than two gallons of gasoline—is easy to attach and operate—can be used on Fords, Overlands, Chevrolets and other cars—is detached in 20 minutes, permitting the use of your car on the road—nothing to get out of order or require adjustment.

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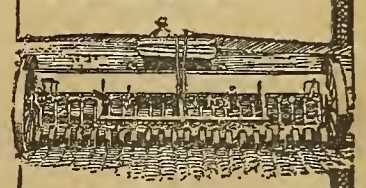
I plowed 180 acres with my Staude at a cost of less than 50 cents an acre. My car is just as good as ever and the engine don't heat. I used about one quart of water a day. I plowed 5 acres a day, where I could only plow 5 acres with 5 horses on the gang. It does the work of six horses and not four.
J. S. Welter, Grafton, N. D.

I cut all my wheat, 450 acres, with a Staude Mak-a-Tractor and am plowing 10 acres a day at the present time with a 14 inch gang, and don't have any trouble with it heating and it doesn't damage the car as much as running on the road.
A. Christophorson, Flaxville, Mont.



My Staude Mak-a-Tractor pulled a 14-disc grain drill over 200 acres of newly broken prairie sod, pulled a 8-section harrow over 200 acres and the same drill over 450 acres more land—all newly broken sod. I averaged 2 1/2 acres per hour with the drill. It has proven absolutely satisfactory.
Carl F. Errebo, Garden City, Kas.

I have pulled two 16-inch plows in sod for five hours and 4 tons on the road for eight miles with my Staude Mak-a-Tractor and the engine never boiled. I don't see that it hurts the car and it will do all the company claims.
C. F. HARRIS,
Orange Lake, N. Y.

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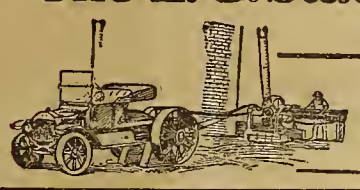
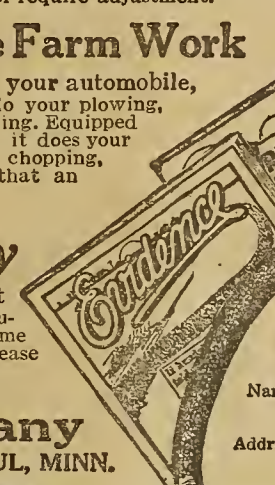


I have got my Staude Mak-a-Tractor belt power attachment at work and it sure is great for sawing wood and grinding feed. Sawed our 40 cords in one day, some as large as 14 inches in diameter and all three men could lift. I say it is great.
Glenn C. Wood, Limaville, Ohio.



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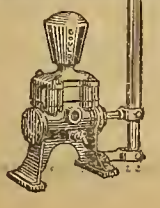
Goulds Fig. 853 Lift and Force Pump for hand pumping



Goulds Fig. 1604 for pumping water and air into air-pressure water systems

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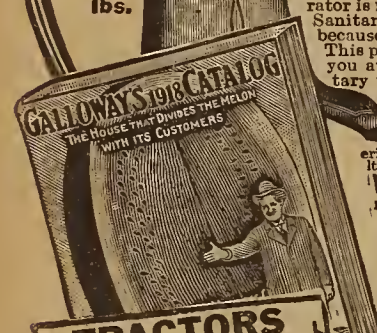
Then you know positively that you are skimming clean, right down to the last drop. My new 1918 separator is not just a warm weather skimmer. When your cows are on dry feed it will skim just as close as when the cows are pasturing. In cold weather you are not so particular if your separator doesn't skim up to rated capacity. But in the spring and summer when the grass is green and the milk flow is heavy you want a separator like the Galloway. A few minutes saved in the morning and evening mean just that much more time in the fields.

All Sizes up to 950 lbs.

Sold Direct to You from My Factory!

And the best thing about my wonderful New Sanitary, next to its perfect skimming qualities, is that the price is right. A too cheap separator is not economy. It's just as bad to pay too little as too much. My Sanitary is in the class of the best machines, but is sold at a fair price because you can buy one direct from my immense factories at Waterloo. This plan saves you the difference in price. I cut out all waste and sell you at the rock bottom factory price. Examine the Galloway Sanitary thoroughly. Test one for 90 days. Note its strong, sturdy base. Big, roomy, seamless supply tank of pressed steel; Heavy tinware; Sanitary bowl; its self-centering neck bearing and simple but effective two-piece lower bearing. Then look at the discs which separate from each other for washing. Takes only a few of them to skim a lot of milk. Cream pail shelf and bowl vise combined in one, with hinge for lowering. Examine its helical drive gear; high crank shaft (just 50 r. p. m.); its high carbon steel worm wheel shaft; oil bath and sanitary drip pan.



Write for Free Book at once. Get the big 1918 spring Catalog. Find out how much you can save when you buy direct—not only on Separators, but on Spreaders, Engines, Tractors and other implements as well. Close shipping points save you freight. O. A. Vick says: "I like your separator just fine. I think it is as good as they can be. If I were to buy another, I would not want any but a Galloway."

WM. GALLOWAY, President

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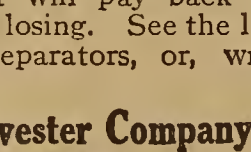
A regular farm power house on wheels. Has anti-friction bearings. 21 sets Hyatt roller and ball bearings. Only 13½% of motor's power needed to pull tractor unloaded. Plows, discs, harrows, hauls, threshes, saws, grinds, shreds, grades roads, fills silos. Pulls three 14-in. bottoms 8 to 9 in. deep. Burns Kerosene or Gasoline

12-20 Size



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Slow speed because that's the way to get the great power. All parts are perfectly balanced, standardized and interchangeable. Runs at uniform speed. Starts easy. No cranking. Has valves-in-head like Automobile Engines. Make and break ignition. Special magneto produces hot spark. Requires no batteries. Fool-proof and frost-proof. Portable or Stationary, 1¼ to 16 H.P.

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The best of its kind and lightest in draft; patented roller feed; steel beater; V rake; automatic stop; uniform clean-out push board; strong tongue; double chain drive; spreads from four to twenty-four loads per acre.

Low Down Light Draft

Cream-Saving Machines

IF you are still setting your milk and skimming by hand, you are losing anywhere from one-fourth to one-third of your cream. If you are using a separator, and it is not one of the best, you are still losing an amount of cream that would surprise you if you knew it. Every farm loss or leak that can be stopped this year should be stopped. Buy a **Lily** or **Primrose** cream separator and stop the cream loss.

Don't imagine that cream left in the skim milk will fatten pigs and calves faster. It has been proved scores of times that stock thrives as fast on warm separator skim milk, when a little meal or flax replaces the fat. Cream in the skim milk is dead-loss cream!

Lily and **Primrose** separators get that cream. We can prove to you that they get it all, except about one drop in each gallon.

Besides that, they are well-known as simple, easy-running, easily-cleaned machines that last and do the same good work year after year. Buy a **Lily** or **Primrose**—it will pay back its cost in cream you may now be losing. See the local dealers who handle these separators, or, write us for catalogues.

International Harvester Company of America
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Live Stock

The Workhorse's Ration

By Dr. John Benson

THE workhorse should have rich food, as the richer the food the more easily it is digested. The amount the workhorses should receive should be regulated by the size as well as by the amount and kind of work he is required to perform. In practice, the workhorse is supplied with approximately 2½ pounds of provender daily for each 100 pounds of weight. Of this amount from one third to two thirds, the exact amount depending on the severity of the labor, should be grain, and the remainder clean hay.

When the work is very heavy, the grain in the ration should be increased and the hay diminished, as grain contains more energy and is more easily digested. On the other hand, when the work is light, the grain should be diminished and the hay increased. The morning and midday meals should be light. They should not possess much bulk, as much bulky food lessens the animal's usefulness. The heavy feeding should come at night, when the horse has ample time to masticate and digest his food, and is not obliged to go to work immediately after eating.

The hard-working horse should be fed and watered so frequently that he will neither become hungry nor thirsty. Thus, he should be fed at least three times, watered not less than four or, if convenient, six times daily. If accessible, therefore, the horse should be watered in the morning before feeding.

For the morning meal feed one fourth of the daily allowance at least one hour before going to work. This should be in a condition to be easily and rapidly consumed, so as to be well digested when the animal goes to work. He should be watered as he goes to work, and after five hours of exhaustive labor he should be given his midday meal.

Before being fed, however, he should have a drink of fresh, cool water, taking care that he does not drink too rapidly or gorge himself if very warm. Feed another one fourth of the daily allowance, and if convenient remove the harness so he can eat in quiet and comfort, and thus gain a few minutes of much-needed rest. Allow one hour to consume the midday meal. After being watered he is ready to begin the second half of his day's labor.

When worked five hours he should be given the evening meal. As he comes to the stable in the evening he should, first of all, be given a drink, exercising care as before to see that he does not drink too rapidly.

The horse is now ready for the remainder of his day's allowance. Unharness at once, and when the sweat has dried give him a thorough brushing. If convenient, he should be given a drink in two hours after feeding, when he may be bedded down and left for the night.

If for some reason the horse is forced to stand idle in the stable for a few days, the grain ration should be reduced; otherwise, he will become stocky and his legs become swollen and stiff. Many horsemen give a bran mash on Saturday evening and reduce the grain on Sunday.

In formulating a ration for the workhorse, due consideration should be given the cost, which will vary with the size of the animal, the nature of the work performed, and the cost of the food. Hays are ordinarily much cheaper than grains, especially on farms, but a hard-working horse is unable economically to dispose of a large proportion of bulky food. It requires time and energy to masticate and digest rough food, which lessens the usefulness of the horse.

Within proper limits the more concentrated the food the less time and energy will be required to make it available. While the relative proportion between the grain and roughage in the ration will depend upon the amount and kind of work performed, yet a hard-working horse should never be expected to consume more roughage than grain by weight.

Start with Grade Sheep

THE inexperienced man should start with grade sheep. If after raising grades for a time he finds that he likes sheep and knows something about them, he may establish a pure-bred flock. In establishing a pure-bred flock one should first decide on the breed to be handled. A breed should be selected that is adapted to the local climatic conditions and is popular, in order that a ready market may be available for the surplus stock.

The most important consideration in establishing a pure-bred flock is the selection of the foundation ewes. Few people realize the importance of good ewes.

Ewes typical of the breed they represent, and uniform in size and conformation, should be selected because they will raise more uniform lambs; and uniform lambs find a market much more quickly than lambs that are off type and lacking in uniformity. Ewes that have a feminine, motherly appearance should be selected, as this is an indication of prolific breeders and good mothers. The eyes should be large, clear, and bright, yet placid, indicating a kind disposition.

The ewes should show plenty of constitution by a wide spring of ribs, and a deep, full chest. They should have a strong back with a thick covering of natural flesh. A little more length of coupling is desirable in the ewe than in the ram, and the hips should be wide apart and the hind quarters full. The body should stand squarely on the four legs, and the feet and pasterns should be strong. The wool should be dense and have quality, strength, and luster.

When establishing a grade flock it is well to choose good, strong Western ewes and a pure-bred ram of mutton type. This makes an excellent foundation. The ewes should be young, uniform in size and build, and show constitution and vigor. Each individual sheep should be examined for age, and only those with good mouths should be chosen for breeding purposes.

Waiting for the word to start with the spring work

Dairying

Simple Way to Ripen Cream

By Chas. E. Richardson

WHEN I was getting interested in making good butter I was ready to learn of any way by which I might improve it. So I sent a sample to the state experiment station, and had it judged there the way that butter is scored in prize competitions. The points in the score are divided as follows:

Flavor	45
Body or grain	25
Color	15
Salt	10
Package	5

I received a perfect score on everything but flavor. While the marking that I got on that was not bad, it was not as much as I had expected. I wish that other farm buttermakers that read this would send as I did, for I feel sure from what I have learned about farm buttermaking since that there will be surprises for many.

One rarely can get a perfect scoring on all of the divisions. In fact, the highest score that I ever knew about was 98, and that is exceptional. If you can score around 96 or 97 you can feel that you are a very good buttermaker. Where most people fail to get full marking is on flavor. You will notice from the above that it has nearly one half of the total points. And from my observations of the way the average farm buttermaker ripens cream, wrong ripening is the principle cause of low scoring on flavor.

So I made up my mind that I would consult several dairymen who had good reputations as farm buttermakers. One day I called to see a farmer that I knew, and asked him: "How do you ripen your cream when you are ready to churn?"

"Well, the way that I do is simply to set it on the back part of the stove in the kitchen the day before I'm going to churn, and it is generally sour enough the next morning," he told me.

"Do you ever stir it, or do you ever find that it is too sour?" I inquired.

"Sometimes we stir it if we have time, but if not it goes all right," he said, "and sometimes it does get pretty sour, especially in the summertime, but then that makes it come quicker I think."

No One Had a Practical Method

I could see that he had no system to speak of, so I went to another and asked him the same question.

"You see, it's like this," he explained: "I do not have to have my butter made at any particular time, so I just let the cream stay until I'm ready, and I generally find it sour. Of course, I plan to churn at least once a week, but if I go a day or so over in the winter I can't see that it does much harm."

I asked several others their methods, and the most seemed to have similar haphazard ways of ripening their cream. I found a few that used a thermometer in a way that gave me an idea that there must be a right way to go about it.

The method by which I had ripened at that time was to heat the cream by putting the pail containing it into a pan of warm water till it reached a warmer temperature, stirring it in the meantime. But I had no idea as to the degree of sourness that would make it as ripe as it should be. So I secured a book telling the right way to make butter, and began to study the methods described.

To Ripen Cream Uniformly

I learned that there were several ways to ripen the cream, but the simplest was to take the cream that had been stored at a temperature between 32 and 40 degrees Fahrenheit and slowly raise the temperature to about 65 degrees in the summer and 75 degrees in the winter. The cream should be sweet to begin with. After reaching the proper temperature, it should be placed where it can be kept at that degree of heat, stirring it at different times to make it ripen uniformly, until it begins to sour. It should have a slight though snappy, sharp sour to it. The mistake that many make is to allow it to get too sour, which makes the butter have a rancid flavor and spoils the keeping qualities.

When the cream has turned I let it get just a trifle more sour, and then place it where it will cool to churning temperature, and let it stay at that for seven or eight hours. Then it is ready to churn. It will be glossy and thick if it has been ripened correctly.

Cream can be ripened by the use of starters, but the above method is much simpler if the proper care has been given to the storing of the cream. As a rule, there will not then be any difficulty in getting the cream to sour as it should.

The thicker the cream the slower it will ripen. And of course thinner cream will sour more quickly.

A hay rack in the pasture can be used to good advantage during early spring and late summer

Individual Churns

By George W. Brown

THE cream-gathering truck stopped the weekly or daily churning for us, and the idea of table butter became a question. The creamery had that fixed before they asked us for our cream.

The nice-looking, high-class creamery butter wrapped in tissue paper and packed in ice, right to our door every time they came for our cream, was their answer.

We tried it. Fresh and clean as it was, it did not fill the want for good country butter.

It is out of the question to make a churning each week with the big churn, and pack it down until used. We have a gallon and a half glass churn which we bought at our hardware store for a small amount two years ago, long enough ago to know that our investment is a success and that it is the real way for the farmer to have butter upon his table.

This sterilized glass churn is capable of making clean butter, and it is operated easily.

Patented milk distributing device used in the New De Laval (sectional view)

Some big advantages that you can obtain only in the

NEW DE LAVAL CREAM SEPARATOR

GREATER CAPACITY: Without increasing the size or weight of the new bowl, its capacity has been increased.

CLOSER SKIMMING: The improved bowl design, together with the patented milk distributor, gives greater skimming efficiency.

EASIER TO WASH: Simpler bowl construction and discs, caulked only on the upper side, make the bowl easier to wash.

HAS SPEED-INDICATOR: Every New De Laval is equipped with a Bell Speed-Indicator, the "Warning Signal" which insures full capacity, thorough separation, proper speed and uniform cream.

EASIER TO TURN: The low speed of the De Laval bowl, the short crank, its unusually large capacity for the size and weight of the bowl, and its automatic oiling throughout, make it the easiest and least tiring to the operator.

WEARS LONGER: Due to its much lower bowl speed, high grade of materials used, and careful and exacting workmanship, the De Laval outlasts and outwears other makes by far.

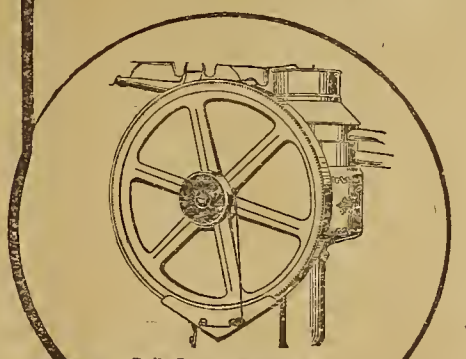
ASSURED SERVICE: In almost every locality there is a De Laval representative, able and ready to serve De Laval users.

If you haven't the spare cash right now, that need not stand in the way of your getting a New De Laval at once. We have an arrangement with De Laval agents which makes it possible for any reputable farmer to secure a De Laval on the partial payment plan—a small payment at the time of purchase and the balance in several instalments—so that your De Laval will actually pay for itself while you are using it and getting the benefit from it.

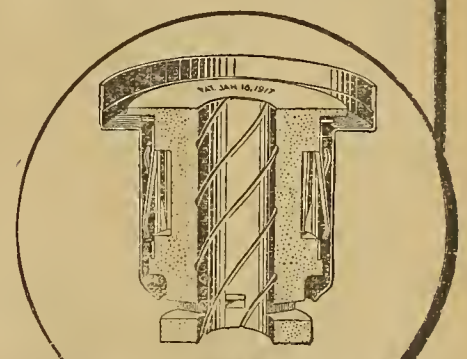
Why not see the nearest De Laval agent at once? If you do not know him, write to the nearest office for new catalog or any desired information.

THE DE LAVAL SEPARATOR CO.

165 Broadway, New York **29 E. Madison St., Chicago**



Bell Speed-Indicator insures proper speed in every New De Laval



Cross-section of New De Laval self-oiling top spindle bearing

Last Call for This Great Cream Separator Sale!!

THE GENUINE TUBULAR "A"

SHARPLES CREAM SEPARATORS

Tremendous Price Reductions!

The "world's best" Cream Separator—Sharples famous original Tubular "A" is now within your reach at a price so low and conditions so liberal, you cannot possibly refuse. Don't put off buying your Separator another day. The time to act is here, for our limited stock is going fast.

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Order direct from this advertisement or write today for Sharples Tubular "A" Cream Separator colored illustrated catalog, **easy terms, 30-days' free trial plan, the double guarantee** and our big **reduced** price offers. Learn why P. M. Sharples picked us for this great public service.

Sale Prices Save You Nearly Half!

Shipments direct to you from eight centrally located distributing warehouses in every section of the country. East—West—North—South. Prices are on board cars at various warehouses. This means big freight savings and quick deliveries. ***Liberal Allowance for Your Old Separator.***

Order No.	Sharples Size	Lbs. per hour	Regular Price	Our Price
GE—20	No. 2	300 lbs.	$ 55.00	★$32.75
GE—30	No. 3	400 lbs.	65.00	★ 40.00
GE—40	No. 4	500 lbs.	75.00	★ 45.00
GE—60	No. 6	700 lbs.	90.00	★ 52.50
GE—90	No. 9	900 lbs.	110.00	★ 70.00

★ *Special discount of 3%, if cash accompanies order.*

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HARRIS BROTHERS CO.
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FREE Sharples Book explains all. Ask for your copy now.

4 H.P.—190 lbs.

The 4 H. P. Cushman Handy Truck is the most useful outfit ever built for farm work. Engine weighs only 190 lbs., and entire outfit only 375 lbs.

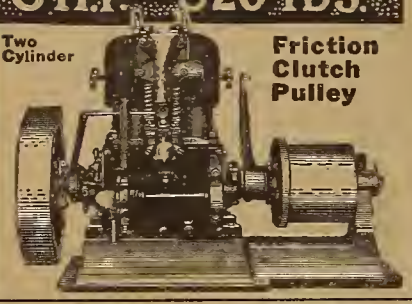
Besides doing all farm and household jobs, this 4 H. P. Cushman may be lifted from truck and hung on rear of hinder during harvest to save a team. In wet weather it saves the crop.

Light Weight Cushman Engines

Built for farmers who need an engine to do many jobs in many places instead of one job in one place. **Throttle Governed,** with Schebler Carburetor. Run very quietly and steadily—not with violent explosions and fast and slow speeds like old-style heavy-weights. Engine Book free.

CUSHMAN MOTOR WORKS
607 N. 21st Street Lincoln, Nebraska

8 H.P.—320 lbs.



Only $2 DOWN ONE YEAR TO PAY

$29 Buys the New Butterfly Junior No. 2. Light running, easy cleaning, close skimming, durable. **Guaranteed a lifetime** against defects in material and workmanship. Made also in five larger sizes up to No. 8 shown here.

30 DAYS' FREE TRIAL Earns its own cost and more by what it saves in cream. Postal brings Free catalog-folder and "direct-from-factory" offer. Buy from the manufacturer and save money.

ALBAUGH-DOVER CO., 2139 Marshall Blvd., CHICAGO

DEATH TO HEAVES! NEWTON'S HEAVE, COUGH, DISTEMPER AND INDIGESTION COMPOUND

Cures Heaves by correcting the cause—Indigestion. Prevents Colic, Staggers, etc. **Best Conditioner and Worm Expeller.** 26 years sale. Three **large cans guaranteed to cure Heaves or money refunded.** The 1st or 2nd can often cures. $.60 and $1.10 per can at dealers' or prepaid by parcel post. Booklet free.

THE NEWTON REMEDY COMPANY, Toledo, Ohio

SICK STOCK

BOOK on treatment of Horses, Cows, Sheep, Dogs and other animals, sent free. Humphreys' Homeopathic Veterinary Medicines, 156 William St., N. Y.

MAKE $30 EXTRA PROFIT PER COW

Make two distinct profits from your milk—one from Minnetonna Home churned butter and one from feeding the skim milk to calves and buttermilk to pigs. We tell you how. Some farmers make $50 per cow extra every year and save lots of work and time. Get the

MINNETONNA CHURN CATALOG AND READ IT

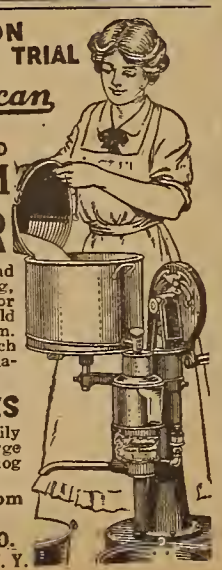
Let the Minnetonna prove how it makes, washes, works, salts and moistens butter ready to wrap in 25 minutes or less. Get information on how to Earn Your Own Churn. Write on letter or postal, "Send Me Money-Saving Catalog." It will reach you by return mail.

Davis-Watkins Dairymens Mfg. Co.
132-C North Wells Street, Chicago, Illinois

Churns It—Works It

$17.95 Upward ON TRIAL

American FULLY GUARANTEED CREAM SEPARATOR



A SOLID PROPOSITION to send new, well made, easy running, perfect skimming separator for $17.95. Closely skims warm or cold milk. Makes heavy or light cream. Different from picture, which illustrates larger capacity machines. See our easy plan of

Monthly Payments

Bowl a *sanitary marvel*, easily cleaned. Whether dairy is large or small, write for free catalog and monthly payment plan.

Western orders filled from Western points.

AMERICAN SEPARATOR CO.
Box 3058 Bainbridge, N. Y.

Saving Money on Feed

By ARTHUR N. WILCOX

CAN farmers save money on dairy feeds? Dairymen are to-day in a difficult situation. They are finding it impossible to produce milk at former prices. The public is slow to believe that this is true, with the result that some dairymen who tried to raise their prices are being prosecuted. At a conference of the county agents of Wisconsin, held to discuss, among other things, the milk situation, Prof. G. C. Humphrey of the University of Wisconsin said that it is possible for the dairymen to save money on feed. He issued a set of tables showing practical grain ration best adapted to his cows and most easily obtainable. The food value of each ration is shown in the tables. The mixtures containing the higher amounts of protein and the greater variety of ingredients, such as No. 2, are recommended only for cows producing more than one pound of butterfat a head daily. Those lower in protein and containing fewer ingredients, like No. 5, are designed for cows producing less than one pound of butterfat. The last mixture, No. 6, is to be used only when corn silage and hay are excellent.

The amount of these mixtures to be

Grain Mixtures for Dairy Cows

Grain Mixture No. 1

Feeds	Amt. lbs.	Cost per ton	Cost per bu.	Cost per lb.	Cost of amt. used	Dry matter lbs.	Digestible Nutrients Protein lbs.	Digestible Nutrients Total lbs.
Bran	100	$33.50		1.675c	$1.68	90.8	12.5	60.9
Gluten feed	100	50.00		2.5	2.50	91.3	21.6	80.7
Ground barley	100		$1.25	2.5	2.50	90.7	9.0	79.4
Ground oats	200	37.50	.60	1.875	3.76	181.6	19.4	140.8
Oilmeal	50	54.00		2.7	1.35	45.5	15.1	38.9
Cottonseed meal	50	50.00		2.5	1.25	46.3	18.5	39.1
Total	600	$43.40		2.17c	$13.04	546.2	96.1	439.8
For 100 lbs. of mixture					2.17	91.0	16.0	73.0

Grain Mixture No. 2

Bran	200	$33.50		1.675c	$3.36	180.0	25.0	122.0
Ground oats	200	37.50	$0.60	1.875	3.76	181.6	19.4	141.0
Gluten feed	200	50.00		2.5	5.00	181.6	43.2	161.4
Dried brewers' grains	200	46.00		2.3	4.60	185.0	43.0	131.4
Oilmeal	100	54.00		2.7	2.70	90.0	30.2	77.9
Total	900	$43.00		2.10c	$19.42	819.10	160.8	633.7
For 100 lbs. of mixture					2.10	91.0	17.8	70.4

Grain Mixture No. 3

Bran	300	$33.50		1.675c	$5.04	269.7	37.5	182.7
Oats	300		$0.60	1.875	5.64	272.4	29.1	211.2
Gluten feed	300	50.00		2.5	7.50	273.9	64.8	242.1
Oilmeal	100	54.00		2.7	2.70	90.9	30.2	77.9
Total	1000	$41.80		2.09c	$20.88	905.69	161.6	713.9
For 100 lbs. of mixture					2.09	91.0	16.0	71.0

Grain Mixture No. 4

Bran	100	$33.50		1.675c	$1.68	89.9	12.5	60.9
Ground oats	100	37.50	$0.60	1.875	1.88	90.8	9.7	70.4
Barley	100		1.25	2.5	2.50	90.7	9.0	79.4
Cottonseed meal	20	50.00		2.5	.50	18.5	7.4	15.1
Oilmeal	20	54.00		2.7	.54	18.2	6.0	15.6
Total	340	$40.00		2.0c	$7.10	308.1	46.6	241.4
For 100 lbs. of mixture					2.00	90.0	13.0	71.0

Grain Mixture No. 5

Oats	200	$37.50	$0.60	1.875c	$3.76	181.6	19.4	141.0
Bran	100	33.50		1.675	1.68	89.9	12.5	60.9
Oilmeal	50	54.00		2.7	1.35	45.5	15.1	38.9
Total	350	$38.00		1.9c	6.79	317.0	47.0	240.8
For 100 lbs. of mixture					1.90	90.0	13.4	72.0

Grain Mixture No. 6

Bran	100	$33.50		1.675c	$1.68	90.8	12.5	60.9
Gluten feed	100	50.00		2.5	2.50	91.3	21.6	80.7
Total	200	$41.80		2.0c	$4.18	182.1	34.1	141.6
For 100 lbs. of mixture					2.00	91.0	17.0	70.3

mixtures which are just as efficient as those commonly used, and considerably cheaper.

In these grain mixtures, feeds which are too high-priced for economical milk production are entirely replaced by cheaper ones. None of the mixtures contain corn. Bran and oats are used the most, with enough barley, cottonseed meal, dried brewers' grains, gluten feed, or oilmeal added to give the ration the proper food value. In this way wholesome mixtures are made at low cost.

None of the mixtures costs more than $2.17 a hundred pounds. One is as low as $1.90 a hundred. The prices were calculated for the latter part of September, and can be changed to suit conditions in any locality.

The dairyman can easily select the fed depends upon the per cent of butterfat in the milk produced. Cows giving a rich milk should be fed one pound of grain for every three pounds of milk. Those giving milk comparatively low in fat should receive one pound of grain for every four pounds of milk.

It will be easier to secure suitable grain mixtures if a good quality of alfalfa or clover hay and of corn silage is fed.

These may be supplemented by the grain as far as the productiveness of the cows and the milk prices justify.

The dairymen should remember several general points: They can save money by co-operating to have dealers order feed in carload lots; they can make their feed do the most good by giving the cows the best possible care.

Where Is He Lame?

Can he be cured? Our FREE Book will tell you 99 times of a hundred, and we are here to help you if you are not s

SAVE-The-HORSE

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Machinery

Wagon Wisdom

By L. E. Eubanks

TO CHOOSE a satisfactory farm wagon requires either experience or advice. There is a vast difference in wagons, and he who buys hastily is apt to regret it many times.

Naturally, your particular use for a wagon will be the first consideration, but in any case you have a right to expect durability even in a very light wagon. The wood should have been air- and kiln-dried. Demand the black birch hub, white oak spokes, felloes, bolsters, and hounds. The best straight-grained white oak makes good axles, and is highly recommended by some wagon makers. If I may advise, I should stand by the hickory axle every time. The metal parts may be of Norway iron or mild steel. For a hilly country, steel skeins will be better than those of cast iron.

If examination of the axle shows an undue number of holes, reject that wagon. Of course, the king bolt must go through, but aside from this prefer clips, for too many holes assuredly weaken this vital part of a wagon.

The tongue and whiffletrees may be of oak, but be certain to have a hickory doubletree. Of course, there must be a metal sleeve for the reach to pass

Floodgate anchored to concrete posts

through; metal plates or collars at the rear points greatly prolong any wagon's life.

The best woods for the wagon box are yellow poplar and three-inch quarter-sawed yellow pine flooring—the former for the sides, the latter for the floor. The bottom should be reinforced beneath with strips of oak. It probably is unnecessary to remind anyone of the importance of rub irons to protect the box from the front wheels' friction in turning.

The resistance encountered in moving a wagon and its load is termed "draft." Reduction of draft always has been a primary aim in wagon-making. Naturally, the lighter a wagon can be, and yet be amply strong for the owner's purpose, the better—that is, as regards economy of horse power and time in transportation. But the size and shape of the wheels, the thickness and width of tires, etc., have a vast deal to do with draft. That wide tires favor easy progress of a load, because they distribute the pressure over a larger surface, is typical of a number of fundamental principles easy of discovery and of practical value.

It is commonly believed that placing the load well forward in a wagon lightens it, in effect. But this is true only when the wagon slopes to the rear. In an ordinary wagon, whose hind wheels are the larger, the greater weight should go to the rear; but there should be no great difference. The best general rule is to distribute the weight about equally, particularly as regards the sides.

Another simple little thing to know, handy in a pinch, is this way of tightening wagon spokes: Place a small stick against the hub for a fulcrum, and use another for a lever. Raise the felloe off the spoke, place a small piece of leather around the tenon, and allow the felloe to drop back in place. Keep this up until the wheel is tight.

The best of wagons require care. Wheels give out first; a good practice is to give them a hot oil bath about three times a year. Keep all wooden parts of the wagon well painted; this keeps out moisture and the resultant rot.

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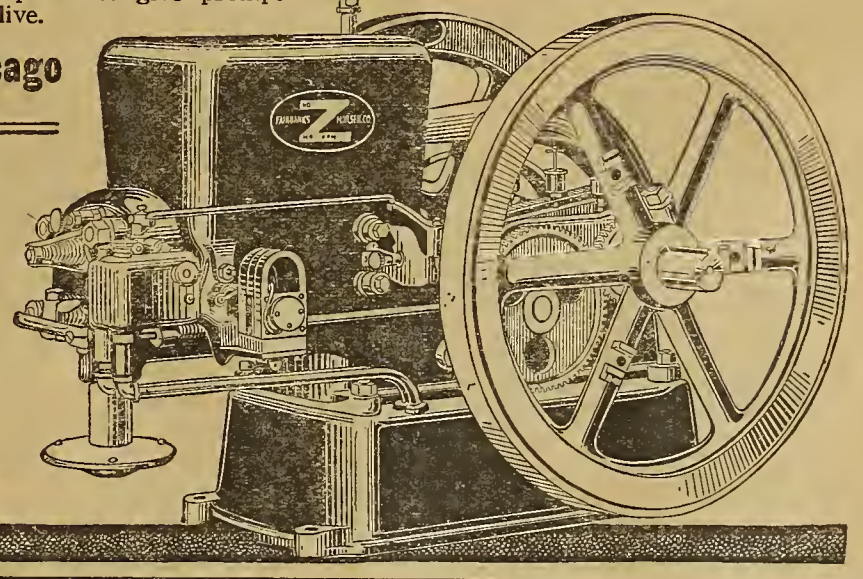

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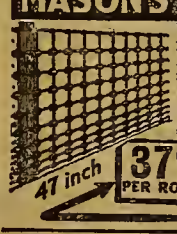

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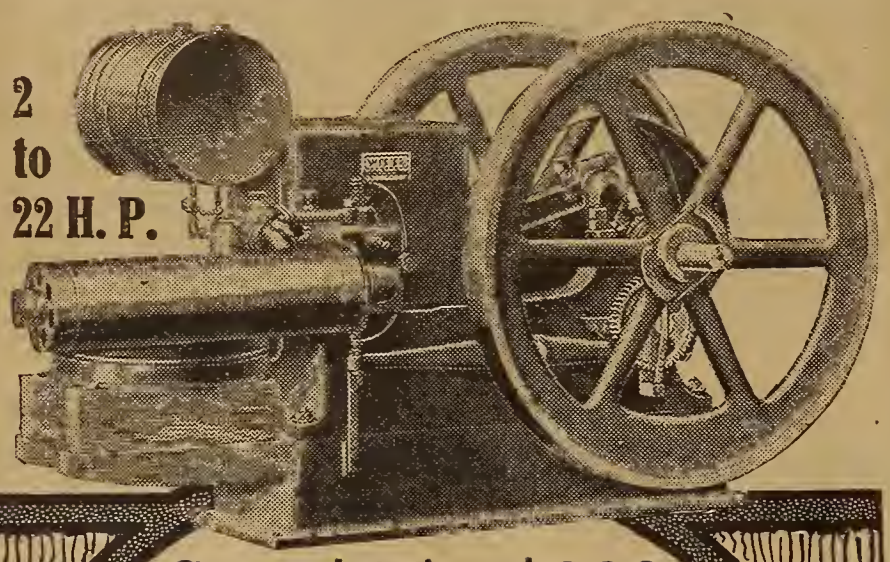

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Machinery

The Tractor Show

By Henry H. Haynes

THE National Tractor Show, held at Kansas City, February 11th to 16th, surpassed the fondest hopes of its promoters in attendance, exhibits, and sales. Every State in the Union was represented by farm owners, tenants, and business men who farm as a side line. They not only came to see, but to buy as well. The sales ran well into the hundreds of thousands of dollars during the week of the show itself, and, as a direct result of the advertising feature, will aggregate much more later on.

Representatives were also in evidence from France, Great Britain, Italy, Russia, and several other foreign countries. In their official capacity they were carefully investigating the merits of the different exhibits, including tractor plows and other attachments, which will result in the placing of large orders for their respective governments. These foreign countries are fully alive to the efficiency of the tractor, especially at the present time when time and labor mean so much.

The buyer was indeed hard to please who could find nothing to his taste. Everything was there; nothing was omitted. The power range was wide, being represented in one, two, and four cylinder engines, with the four cylinders predominating. The little 5-10, ready to pull two plows, stood beside the huge 40-80, capable of handling 10 to 12 plows or the largest separator manufactured. There was one, two, and even four wheel drive. There were tractors of the crawler type, with one or two supporting wheels, and in several cases no wheels at all.

Interest seemed to center, for the most part, about the medium and larger sized tractors. The small ones had their followers, of course, but the machines with a drawbar pull of from 10 to 20 horsepower, and prices ranging from $850 to $2,000, commanded the most attention. The farmer is beginning to realize that though the small tractor is good for some kinds of work, in the long run it will pay to buy the higher powered machine. The manufacturers, as a rule, this year are underrating their tractors with regard to power, thus doing away with the tendency to overload. The average farmer goes by the horsepower rating that the factory sets on its machine, and if that rating is too high, as it has been in several cases in the past, overloading results. With a lower rating the load is kept down to where it should be, the tractor handles the work easily, lasts longer, and has plenty of surplus power in an emergency.

The exhibit of tractor plows and disk-harrow gangs was very complete. It has been proved beyond a doubt that the ordinary horse plow for use with a tractor is inefficient. The tractor gang is built heavier throughout, has power lift, and is well able to stand the severe strain that an implement of this kind is subjected to.

Several different kinds of hitches were on display, for use with binders, mowers, drills, etc. The hitch plays an important part in the quality of the work that a tractor does, as evidenced by the interest taken in them at the show.

The tractor accessories received their full share of attention. The majority of the exhibits of accessories consisted of various improved forms of carburetion and ignition. It has been found through costly experience that the ordinary carburetor draws into the cylinders a vast quantity of dust and grit. This is not surprising, considering the conditions under which the tractor is compelled to work. Therefore, the accessory manufacturers have stepped in with a device in several forms whereby the air is cleansed of all dust and foreign matter before it enters the carburetor. Many of the tractors at the show were fitted with these air cleaners as a part of the regular equipment.

Have Improved Ignition

The ignition systems on display showed many improvements. They have been perfected to withstand the action of dust and water, and will deliver a hot, fat spark under the most adverse conditions.

This outfit seeds an acre in five minutes

The general attitude at the show was one of expectancy on part of the buyer. He is looking for the ultimate tractor. Both the manufacturer and the buyer are well aware that the tractor is far from perfect. But the farmer does not kick. He needs tractors and is going to buy them. It is largely through the farmer's observations and suggestions that improvements are brought about, and while the tractor of the present is one of his most efficient workers on the farm, he stands ready to aid the manufacturer in any way he can toward its improvement.

Plowing with a Tractor

By H. H. Clemons

AFTER I had been plowing with a tractor for a while, I noticed that I was not finishing up the corners of my fields in very good shape.

Of course I plowed the main part of my field by lands, but I was leaving a good-sized headland, and when the strip on each side of the field was the same width as the headlands, I plowed around the field, throwing the dirt in toward the plowed field.

At first I would plow up to the corner while making these rounds, raise my plow as soon as I had them even with the last furrow, turn around, and drop them on a line with the furrow last plowed, and so on around the field, just as I had been used to doing with a team and sulky plow.

By plowing a short distance past the last furrow on the corner I found that I was able to make corners with no triangles of unplowed land as had previously been the trouble.

Garden and Orchard

Prune; Don't Cut and Slash

By B. F. W. Thorpe

ISN'T it a fact that the pruning of fruit trees, as too commonly understood, is a wholesale cutting and slashing of the treetops? Instead, proper pruning of apple, pear, cherry, and most other orchard fruits, with peaches as a possible exception, the operation of proper pruning should be considered as cutting the least wood possible from the trees from the time they are set until they come into bearing.

Whenever a branch of much size is cut from a tree, at once there are thrown out a number of shoots near and below where the branch was severed. This makes a heavier drain on the strength of the tree, and the effect is to destroy the natural symmetrical development of the top. Also, unless the numerous sprouts are kept rubbed off, there is soon much greater need of pruning than before.

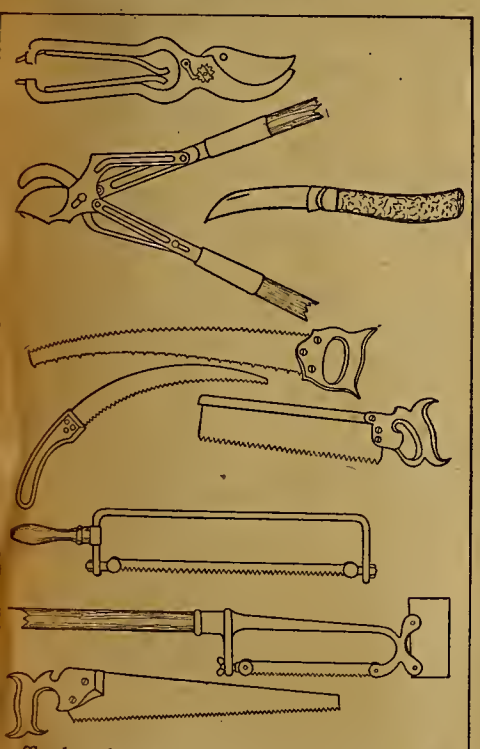
If trees could be pruned once or, better, twice each season, small pruning shears and the caretaker's fingers, unarmed with any cutting device, would do all that would be required.

As a young tree begins to grow after setting, a bud or shoot here and there that promises to occupy a wrong position in the future top of the tree is easily rubbed off, and later cutting is thus avoided. Again, about midsummer, another quick look at each young tree will discover any other sprouts needing similar rubbing treatment. Hundreds of young trees can be thus looked over and given treatment without tools in one day's time. This plan of treatment and time required hold good to a greater or less extent until the young trees are three, four, five, and even six years old.

Trees thus handled come into bearing earlier, have greater strength of wood, which prevents splitting and breaking under heavy loads of fruit, and the trees live longer.

Peach-pruning comes in a class by itself, to forestall disease and secure the heaviest production from trees that are usually short-lived.

Where orchard operations are extensive, a good and full assortment of pruning tools is a valuable investment, so that just the right tool will be at hand to do the pruning job with the least possible injury to the tree.



Tools adapted to the pruning job to be done save time and injury to trees

Don't Neglect Young Trees

ALL too many owners of a few choice fruit trees, set out in the garden or home grounds, have but little idea of the importance of protecting the trees by spraying while they are small and up to the time when they come into bearing. One often hears owners of a few young fruit trees, and even the owners of commercial orchards recently set out, remark: "By the time my young trees come into bearing I shall equip myself with a spraying outfit, and be ready to protect the fruit from insects and fungous diseases."

It is now well understood by skilled, experienced growers of orchard fruits that the systematic and proper protection of young fruit trees by spraying is valuable insurance against serious injuries which are likely to kill or weaken the trees before they arrive at the age for bearing.

Among the worst dangers to young fruit trees are scale insects, canker, and

Spraying in time saves many a dime. Don't wait until trees grow up

blights. There are also other fungous diseases which cause the leaves—which are the lungs of the trees—to become unhealthy and stunt or stop the growth, and so weaken the tree's vitality.

I have found it safest to begin applying protective sprays the same year the young trees are set out, and thereby give them every chance to escape injury and get as vigorous as possible better to withstand their first winter.

But little time and spray material are required for spraying young fruit trees while they are small, and while the spraying is being done it is an easy matter to do the slight pruning that is sufficient if the pruning shears are used each year regularly.

Save What You Plant

NEVER before was it so important to make every ounce of man, horse, and motor power count in productive harvests as this year. To accomplish this we must make certain of good soil preparation, seed, culture, and protection of crops, and to see that they are in no wise neglected from start to finish. We must have a clear vision of our job. Then it's "over the top" to success.

Enlarging the Garden

By W. A. Graham

I HOPE there are a multitude of garden makers, as well as myself, intending to enlarge their gardens this year so that the field crops best adapted for war needs may be left more largely intact for the allied fighting forces and their supporters at and near the front.

Heretofore my garden has been a little less than a quarter of an acre. This spring it will be three quarters of an acre, so that it will practically feed our family, together with the poultry products and tree, bush, and cane fruits, for the entire year. We plan to fill our storeroom shelves as never before with a large variety of canned vegetables and fruits, and store the late-maturing varieties in pits and other ways of outdoor storage.

By raising all of the staple and some of the less commonly grown garden products, the variety can be made so great that our family will be well nourished and the various appetites accommodated.

Caring for a garden of the size mentioned is not a dreaded task if the advance preparation is thorough and all crops are planted in rows arranged for horse- and wheel-hoe culture. Let me urge many to enlarge their gardens and plan to make them the best ever grown.

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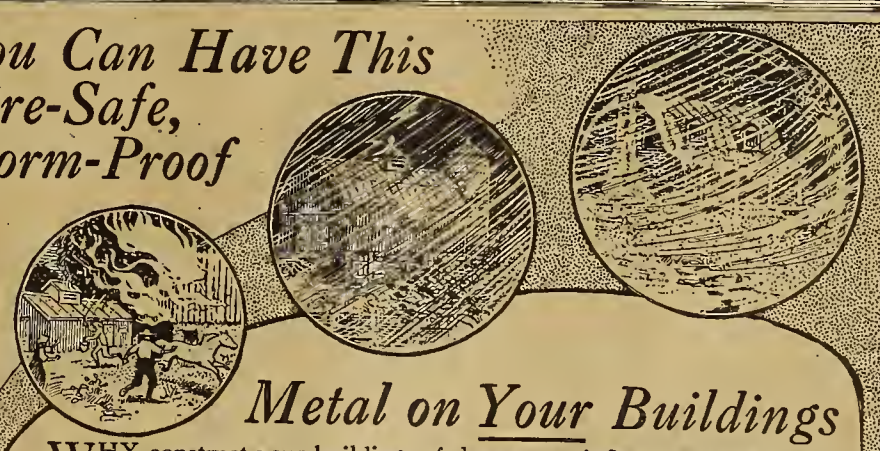

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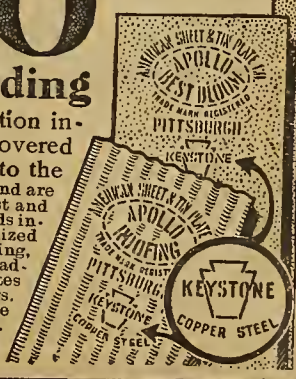

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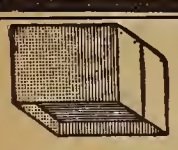
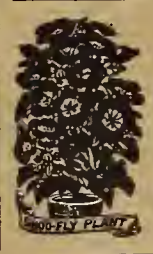
SALESMEN wanted for the best nursery outfit in America. Persistent men earn large commissions paid weekly. Investigate. Address,
PERRY NURSERY COMPANY **Rochester, N. Y.**



Get Low Prices on Berry Boxes and Baskets

Write for our **Free Catalog!** Shows you how you can save money by buying direct from *the largest Berry Box and Basket Factory in the Country.*

New Albany Box & Basket Co., Box 109 New Albany, Ind.

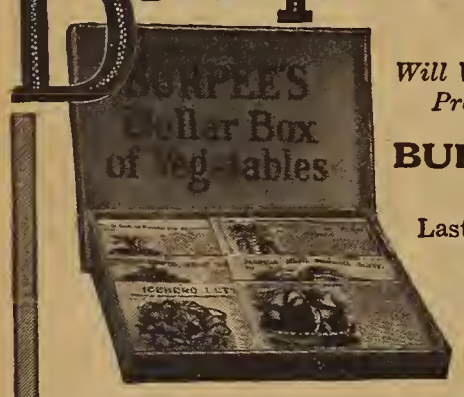


Shoo Fly Plant

KEEPS FLIES OUT OF THE HOUSE

It is said flies will not stay in a room where it is grown. Very mysterious, but tests show such to be the case. Blooms in a short time (60 days from planting). Flowers both summer and winter. Package of seed by mail with catalogue, **10 Cents. JAPAN SEED CO., Desk N, South Norwalk, Conn.**

Burpee's Seeds Grow



Food Will Win the War Produce It!

BURPEE'S DOLLAR BOX of Vegetable Seeds

Last year we offered for the first time Burpee's Dollar Box of Vegetable Seeds. The Sales exceeded by many thousands our fondest expectations.

For 1918 it has been improved by the addition of a complete garden plan and leaflet on Seed Sowing.

It contains the following seeds, mailed to your address for **$1.00.**

Bean—Stringless Green Pod	Carrot—Chantenay	Parsley—Moss Curled
Bean—Fordhook Bush Lima	Chard—Large Ribbed White	Radish—Scarlet Turnip
Bean—Brittle Wax	Lettuce—Iceberg	Salsify—Sandwich Island
Beet—Crosby's	Lettuce—Wayahead	Tomato—Chalk's Jewel
Beet—Improved Blood	Onion—White Portugal	Turnip—Purple Top Strap-Leaf
Cabbage—Allhead Early		

Burpee's Annual for 1918 *The Leading American Seed Catalog* **216 pages, 103 colored illustrations of** Vegetables and Flowers, is mailed free upon request. Write for your copy today.

W. ATLEE BURPEE & CO., Seed Growers, Philadelphia

Garden and Orchard

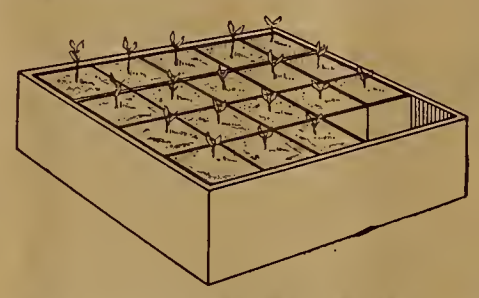
Garden Half a Living

By E. W. Webster

THE gardenless family in these war-disrupted times has my sincere sympathy.

Mine is not a model garden by any means, but it means much to your humble servant and family. Less than one-sixth acre—60x120 feet—means about half of a comfortable living.

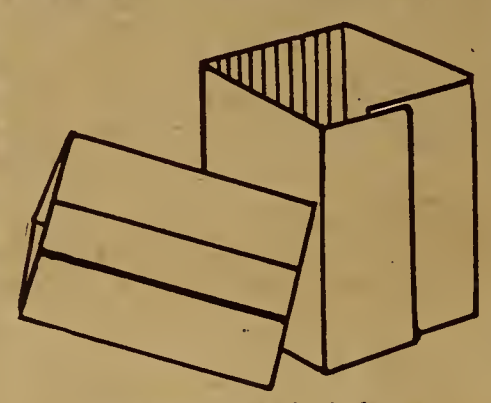
I find my labor of cultivation is lessened by practically one half by growing everything in rows the full length of the garden—120 feet—which allows un-



Twenty plants can be moved as one

interrupted passage of my wheel hoe and its varied cultural and seeding equipments. The larger growing crops, like corn, potatoes, and cabbage, are spaced 30 inches apart between rows, and onions, lettuce, beets, and the like from 18 to 24 inches apart, which gives me approximately a full mile of garden truck, were the rows placed end to end. Do you wonder that "garden sass" almost beyond our power of consumption can be gathered from my garden for more than half the year, and a rich collection stored in cans and pots?

Here is about my usual garden layout: Five rows each of potatoes, sugar corn, and beans (latter for winter use), and two of snap beans. Then come rows or parts of rows of cabbage, tomatoes, onions, peas, beets, carrots, turnips, parsnips, lettuce, radishes, kohl-rabi, cucumbers, squash, celery, cauliflower, peppers, parsley, spinach, and Swiss chard.



Paper plant holder for little cost

Another small garden, about half as large as the first described, is devoted entirely to limited areas but choice varieties of strawberries, raspberries, currants, gooseberries, and a half-dozen grapevines trained on wire fencing.

I give exceptionally good soil preparation, and use well-adapted, up-to-date tools, and a thoroughly effective barrow-mounted spraying outfit.

I find it an immense help to rotate my garden crops, changing the plants as far from where they grew the previous year as possible, which discourages plant diseases and root-injuring insect pests.

Canning-Truck Prices

THE extreme war demand for canned goods is boosting contract prices, as shown by the prices being issued by a big canning plant. One of these, operating canneries in Ohio, Indiana, Illinois, and Michigan, is offering a contract to truck growers containing the following scheduled prices:

Tomatoes	$15 to $18 per ton
Sugar corn (in husk)	$18 to $20 " "
Peas (after shelling)	$50 to $60 " "
String beans	2 to 6c per pound
Lima beans (shelled)	$120 per ton
Beets	$10 to $30 " "
Spinach	$15 " "

It is always the part of wisdom, when contracting with packers, to have the contract very carefully drawn so that no later misunderstandings will result.

Make Money With This Flour Mill
$150 to $1,000 Per Month Making FLavoFLour

You can do this by owning and operating one of these wonderful self-contained flour mills, and sell most of the flour used in your community.

The American Marvel is the sensation in flour mills, and is revolutionizing milling. It is the latest improved roller mill, and makes better, purer and whiter flour at less cost, so gives you greater profits. One man without previous milling experience can run it.

American Marvel Mill

When you purchase an American Marvel Mill you become a member of the Community Marvel Millers Association, and you can put your flour up under our nationally advertised brand "FLavo" as shown below. Your mill is then inspected every 30 days by our Service Department to keep you up to quality. We start you off and practically make your success assured.

Advertised Everywhere Known to and wanted by millions

Sanitary Milling Company, Bowling Green, Ky., write Feb. 1, '18: "I can't fill one-fifth of my orders."

This is one of the most permanent money-making business opportunities today. It can be yours complete with new building and power, if you have as much as $2,000 to invest. Sizes of mills, 15, 25, 40, 50, 75 and 100 barrels a day. Power required, from 6 h. p. up. Sold on cash or easy payment. 30 days' trial.

Write for "The Story of a Wonderful Flour Mill," experiences of owners, and our proposition about the opportunity of making FLavo FLour on the American Marvel Mill in your community, FREE.

Anglo-American Mill Co., Inc., 421-427 Trust Bldg., Owensboro, Ky.

Ditch for Profits

Insure big crops every year. Don't let crops drown out. Drain with

The Martin **FARM DITCHER GRADER TERRACER**

All steel, reversible, adjustable. Cuts or cleans ditch down to 4 ft. deep—any soil—does labor of 100 men. Write for free drainage book.

Owensboro Ditcher & Grader Co. Box 107 Owensboro, Ky. Model 20

Cabbage Plants for Sale

Frostproof cabbage plants—Early Jersey Wakefield, Charleston Wakefield, Succession and Flat Dutch, at $1.50 per 1000, express collect; 40 cents per 100, parcel post, postpaid.
C. J. & C. WHALEY, Martin's Point P. O., S. C.

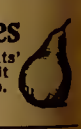
Market Gardener's Paper

If you grow vegetables, send 25 cents for 3 months' trial subscription and find out what you have been missing. Do it today. Satisfaction guaranteed or money back.

MARKET GROWERS JOURNAL, 605 Inter-Southern Bldg., Louisville, Ky.

Trees—Roses—Vines

in small or large lots at half agents' prices. Catalog and Green's Fruit Book—FREE. **Green's Nursery Co. 19 Wall St., Rochester, N. Y.**



ALMOST 4 APPLE TREES FREE

Splendid little trees about a foot long. Each tree is produced by grafting together a selected terminal branch from a heavy cropping tree and a strong root. Grows rapidly. Bears earlier than many larger trees set at the same time. Trees of better quality cannot be secured even at double the price.

FOUR BEST VARIETIES

DELICIOUS—Finest Apple Grown. Wonderful flavor and aroma.

STAYMAN WINESAP—Favorite for cooking. Red. Fine flavor.

JONATHAN—Remarkably sweet and juicy. Very hardy.

WEALTHY—Deep red. Rich winey flavor. A general favorite.

4 TREES GIVEN WITH OUR PAPER (ONE OF EACH KIND)

We will positively send these FOUR APPLE TREES, all charges paid by us, if you will simply take advantage NOW of our

Special Offer Send to us with your name and address, and only 35 cents for year's subscription to THE ILLUSTRATED COMPANION and the Four Apple Trees will be sent to you FREE AND FULLY POSTPAID. Full Instructions for planting and care of Trees will be published in THE ILLUSTRATED COMPANION.

Libbie Sprague Phillips writes exclusively for THE ILLUSTRATED COMPANION; has done so for 10 years. One minister has furnished us with sermons for 13 years; other writers have contributed regularly for years. THE ILLUSTRATED COMPANION is 36 years old. The years of continued service of its writers show that our magazine is one of fixed and standard worth. We know you will enjoy reading it. This offer of magazine one year, and 4 Apple Trees for only 35c. Is to get new subscribers. Four Apple Trees without paper 17c. Address

F. B. WARNER CO., Dept. F. F., 96 Chambers St., New York

Crops and Soils

The Part Plowing Plays

By John Coleman

A FEW years ago F. Bowman of Decatur County, Iowa, won first prize in a corn-growing contest, with 109 bushels and 40 pounds of corn on the acre measured. Mr. Bowman's field was a blue-grass sod, fall plowed, seven inches deep. His neighbors did not grow any such crop of corn, and they discovered that wire-worms and grubs made replanting necessary in a number of instances. Assuming that the average crop was 60 bushels an acre—and this is a high average—the difference between 60 bushels and 109 bushels, 49 bushels, represents the additional wealth of Mr. Bowman for having fall-plowed that blue-grass sod. The secret of his success was the freezing of the grub- and wire-worms on his fall-plowed sod, and the opportunity to get on his field earlier in the year with his disk harrow and make the kind of a seed bed that nature demands for the corn crop.

The reason for soft corn last year through much of the corn-growing sections was not altogether the early fall frosts, but was also due to the fact that many farmers failed to get their corn planted in time, and to the backward season. A person can't control the weather, but he can place himself in position to remedy the evil effects of bad weather conditions. He can do this with a plow.

No one can plow, harrow, and cultivate his ground in the same manner any two successive years with the expectation of growing a maximum crop. Nature never gives a person the same soil and weather conditions in any two years.

Although plows decide the destinies of nations, their proper use has been given the least thought and attention of any farming operation. Persons connected directly or indirectly with the use of plows should make a special effort to see that everyone is given every opportunity to understand the whys and wherefors of plowing and its relation to the increased crops which are vital to the nation in 1918?

We have not learned as a nation of farmers that with the proper use of the plow the weed nuisance of the United States and Canada, which entails a loss no man attempts to estimate, can be eradicated.

The proper use of the plow will eradicate the weed nuisance of our country

Headaches Due to Eyes

MANY farmers wonder why their heads ache after a long day in the field. They blame the rich food they ate, but nine times out of ten their eyes are causing the trouble.

The farmer thinks because he does not read a great deal that his eyes should not bother him, but a day of plowing or of riding in the wind is as tiring to the eyes as a day of study.

If all counties required a periodical medical examination of school children, complaints of the young farmer would be found and adjusted. The farmer would then know the ailments of his children and incidentally find out for himself.

A county health officer, working full time, should be employed in every county. He should test the eyes, ears, and noses of the children and make all other necessary examinations.

The health officer should keep careful watch on all epidemics that break out in the county. The employment of this officer would be a great economic saving to the county. One case of typhoid fever caught in time will save ten other cases.

As soon as this system is used by all counties the farmer will know his ailments, and, knowing how to treat them, he will be a healthier, happier man.

Good Fences—Good Neighbors

By C. E. Davis

NO TRUER saying was ever coined than this: "Good fences make good neighbors, and poor fences, bad neighbors."

So slack and dilatory about the upkeep of fences were some landowners who "joined" fences with me at one time, I stopped all parley concerning the matter, and erected substantial wire fences wherever the adjoining landowners refused to do so. Their repeated promises of fence improvement never materialized.

But, although the expense and labor of erecting my neighbor's part of the line fence was not an agreeable experience at the time, the job proved to be a profitable business investment.

An appeal in friendly spirit for fence improvement and fence upkeep among neighbors will often secure co-operative effort. But, rather than have constant "fence friction" with adjoining landowners, I prefer to fence in my farm at my own expense when the only other recourse is to take the matter into court and thereby gain the lasting enmity of those with whom you are in constant association.

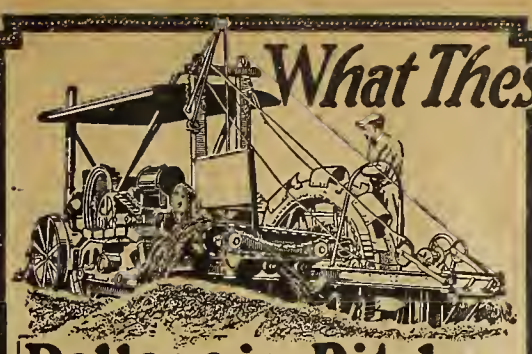
The Seed Bed

By M. N. Harrison

PEOPLE are beginning to realize that if they want to profit as they should by planting a high-yielding strain of wheat it is necessary for them to provide a favorable place for it to grow. The preparation of a good seed bed cannot be overemphasized. It has much more to do with increasing yields than the variety grown.

We need to give our land a rest from wheat once in a while, and plant it to some other crop like corn or alfalfa. We need to carry some live stock on the land and utilize as feed the roughage that now goes to waste on many farms.

By diversifying crops and maintaining a few head of live stock on each wheat farm, the wheat grower will furnish himself with profitable employment every working day in the year.



What These Men Are Doing You Can Do.

Dollars in Ditches

Three facts that point to an unusual money-making opportunity:

1st: The urgent need for increased crop production is creating a great demand for tile drainage.

2nd: So many men are being taken by the army that the needed ditching cannot be done by hand.

3rd: A man with one helper can take a "A Perfect Trench at One Cut" BUCKEYE Traction Ditcher and dig more ditches each day than fifteen men by hand.

This man is entitled to earn large profits—and does it. At the same time he performs an important patriotic service by aiding food production.

If you consider the opportunity to be worth investigating send for complete descriptive literature. You will learn how the Buckeye cuts 100 to 150 rods of high class ditch a day—works winter and summer through frost, hardpan or swampy land.

Our Service Department can show you how to get the right start at this highly profitable business.

Write today—no cost or obligation.

The Buckeye Traction Ditcher Co.
402 Crystal Ave. Findlay, Ohio

"The Ditcher I bought of you last fall has given good satisfaction. I put in 4,700 rods in 50 days at an average depth of 3½ feet, with an average of 94 rods per day at 30 cents per rod, fuel expense 2½ cents per rod. The farmers are well pleased with the work and I have more than I can do." Martin Wallerich.

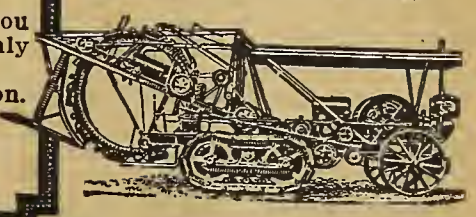
"For sixty-eight (68) days work I have made eleven hundred dollars ($1100.00) clear above expenses, soil all in the worst possible condition for operating. "I have been in the ditching business fifteen years. The prospects for work in southern Iowa were never better." Guy Henry.

Gentlemen: Thinking you might be interested in what Machine No. 925 has done during the year, will send the following figures:

Total rods	5381
Number of days	67
Total amount	$1077.43
Operator	134.00
Fuel and repairs	252.17
Profit	691.26

Our first job was done May 15th. Have run this machine entirely alone; considering that don't think I have done bad. A. D. Sadler.

"I bought the Ditcher three years ago, principally to tile my farm and have tiled it completely. Have done enough outside work to more than pay back the price of the machine and all expenses. On one job I dug 80 rods in 4 hours and another 160 rods in 9 hours. Have not paid out $10.00 for breakage." L. R. Wiles.



This Year's Most Thrilling Love Story

E. PHILLIPS OPPENHEIM
Author of "The Zeppelin's Passenger"

JAMES MONTGOMERY FLAGG
Who Will Illustrate the Story

E. PHILLIPS OPPENHEIM has just completed one of the most thrilling and sensational love stories ever written. "The Zeppelin's Passenger" is the name of the story, and it's a heart-stirring, breathless romance of war and adventure and patriotism and love. The very fact that the great Oppenheim is the author is positive assurance that you will like it. And when you know that "The Zeppelin's Passenger" is Oppenheim at his best, you will realize what a really great treat is in store for you. You must read it in

The New and Greater McCALL'S

Soon to be $1.00 a Year

Oppenheim's novel is only one of three new novels you will get in the coming year's subscription. Besides these novels, and many intensely interesting short stories, the NEW McCALL'S will keep you posted on what the world is doing. It will tell you how you can help in the great world-war, it will act as your guide in every household problem, and will give you just the money-saving, labor-saving and time-saving suggestions that every thrifty American is constantly looking for. In addition to all this, there will be the famous McCall Fashions. In short, the NEW McCALL'S is to be the same McCALL'S that has been the choice of over a million homes for many years, only bigger, better, handsomer, more helpful in every possible way.

NOTE: Oppenheim's story when published in book-form will cost $1.50. By sending your subscription immediately, you get this great novel and at least two others at the remarkably low prices given below.

McCall's 1 yr.	75c	Farm & Fireside 1 yr.	Both for
McCall's 2 yrs.	$1.25	McCall's 1 yr.	90c

INTRODUCTORY OFFER! Or send only 25c for a 5 months' trial subscription just to get acquainted with the New and Greater McCall's.

THE McCALL COMPANY, 250 W. 37th Street, New York, N. Y.

POULTRY
MUST HELP
FEED THE NATION

KRESO DIP No I.

A SANITARY NECESSITY
IN RAISING
HEALTHY POULTRY

KILLS LICE AND MITES.
WILL HELP STOP LOSS FROM DISEASE.

One Gallon
Makes 72 Gallons
of Solution ready for use.

EQUALLY GOOD FOR ALL LIVE STOCK.

Write for Free Descriptive Booklets on Poultry and Livestock Sanitation.

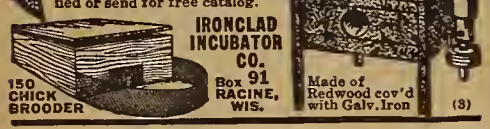
ANIMAL INDUSTRY DEPARTMENT OF
PARKE, DAVIS & CO.
DETROIT, MICHIGAN.

You Take No RISK With An **Ironclad** Both $12.50 Freight Paid
30 Days Free Trial
10 Yr. Guarantee

Think of it! You can now get this famous Iron Covered Incubator and California Redwood Brooder on 30 days trial, with a ten-year guarantee, freight paid east of the Rockies.

150 EGG INCUBATOR
CHICK BROODER

Incubator is covered with galvanized iron, triple walls, copper tanks, nursery, egg tester. Set up ready to run. Brooder is roomy and well made. Order direct from this advertisement—money back if not satisfied or send for free catalog.



IRONCLAD INCUBATOR CO.
Box 91 RACINE, WIS.

(3)

60 BREEDS Chickens, Ducks, Geese, Turkeys, Guineas, Bantams, Cavies, Belgian Hares, Collies and Fox Terriers. Stock and Eggs. Large Illus. Catalog free. Write for yours now. Edwin A. Souder, Telford, Pa.

WHY CHICKS DIE IN THE SHELL

How to Prevent It

How many high priced eggs have you lost in incubation this season? Low fertility and poor hatches soon waste a lot of money. Everyone has had more or less chicks develop up to the hatching day—then die in the shell. Many people think the incubator is at fault, but in most cases the cause of the loss lies in the operation of your machine; the care, feeding and housing of your breeding stock; the selection of your breeders and other similar mistakes. If you ever expect to have good fertility and good hatches the "big four" things you must do right are in mating and breeding of your stock together with feeding and housing.

Right at this season of the year the two things which you "must do and do right" are to hatch and brood the chicks without mistakes. Can you do it? Have you done it?

It's better to be sure than sorry, and for that reason you should write today for that wonderful book written by Professor T. E. Quisenberry, former Director of the Missouri Poultry Experiment Station. This book is called "Dollars and Sense in Poultry Raising" and shows how to avoid expensive mistakes common to both the professional raiser and the beginner. This book and a new bulletin on "Solving the Poultry Feeding Problem" and on "Brooding Young Chicks" will be mailed free. Although not required, three 2c stamps to cover mailing cost would be appreciated. Address Prof. T. E. Quisenberry, President American School Poultry Husbandry, Box 922, Leavenworth, Kas., today and get your copies before all of the last edition are given away.

Poultry

An Additional Dollar per Hen

By B. F. W. Thorpe

THE Sixth Laying Contest that ended November 1, 1917, at Mountain Grove, Missouri, showed a gain of 35 eggs per hen over the average lay of the hens in the first contest held six years ago. This means that the 100 pens of hens making up the contest have improved in laying quality over 25 per cent in six years. Put on a money basis, each hen can now be counted on to earn $1.25 more of income than the hens composing the first contest if they had been kept under present feed-cost conditions.

The 500 hens in the Mountain Grove sixth contest, by making this high average production (170 eggs per hen), returned a gross income of $4.10 per hen, if we reckon the average selling price of an egg for the past year to be three cents. This year the income from 170-egg hens will be $6 or more to all poultry-keepers who conduct the marketing of their eggs in a businesslike manner.

There is no longer any excuse for keeping flocks of hens that cannot be made to average 140 to 150 eggs each in their pullet year. For now there is no lack of high-producing flocks of utility stock, scattered all over the country, that have descended from stock that have proved their ability to lay heavily in one or more laying contests. The poultry keeper who is now content to continue with the out-of-date scrub-hen stock must be satisfied to pocket his losses until he is willing to change his methods of poultry-keeping.

Thunder Doesn't Spoil Hatches

By S. O. Bryant

A HOARY-HEADED poultry theory is that thunder spoils the hatchability of eggs. We got this idea from old-timers as soon as we commenced keeping chickens, but our own experience proves that it is largely a superstitious myth. We have had many hatches that could not have been better, in spite of violent electrical disturbance of the elements.

Quite often severe thunderstorms have come up at the time supposed to be most dangerous to the success of the hatch—just a few days before the eggs

Ridged, misshapen, and too nearly round shells contribute to crippling chicks

were due to start pipping—yet the number of chicks that came out of the shells appeared quite normal, and the chicks were strong and healthy.

We have also had good hatches in spite of blasting or other such shocks, except when the vibrations were so near or severe that they leveled buildings or broke window lights. Even then we have found that the embryo chicks are not always killed, or even harmed.

While we take no stock in the thunder theory any more, yet we try to avoid all sudden jars or shocks direct to the egg, as well as rough handling in shipment. The success of hatches is almost always in direct proportion to the care given the eggs when the fertility is strong.

Isn't Professor Linn Right?

If you think he is, write to-day to your Congressman and Senator and tell them so

Just before adjournment last September, Congress hurriedly adopted the Zone System for second-class postage rates. It is a bad law, and there is still time to change it, since it does not go into effect until July 1st.

One of the clearest presentations of the folly of curbing our great national magazines comes from the pen of Professor J. W. Linn of the University of Chicago—a man of knowledge and vision, who sees our country as a whole, reading and thinking and feeling as one people. Read what Professor Linn says:

If the proposed Zone System of postal rates should be adopted, the result would be the extermination of a very large number of magazines and, as far as the rest are concerned, a large increase in price to the subscriber. Now, I am not speaking from the slightest financial interest in the publishing business. I have no connection with it whatever. I am a teacher of English in a university, and have been for eighteen years. What I should like to do is to point out the result to the nation if you increase the price and limit the circulation of newspapers and magazines.

Many of these newspapers and magazines have a definite, even what might be called a formal, educational influence—particularly the magazines. They are constantly used in our schools and colleges all over the country as text books—used in courses in literature, in composition, in history, in civics, in science.

Hundreds of thousands of copies weekly or monthly are so employed. They have taken a recognized place in modern education. The whole effort of that education at the present day is to vitalize the schools; to connect up boys and girls with affairs and to develop their vocational opportunities. The magazines are serving this effort splendidly.

There is hardly a big university, in the West at any rate, there are few small colleges, which do not employ them in class-room work; and the number of high schools in which they are used runs into thousands. You say such magazines will not be eliminated? They must, however, pass on the tax; they must greatly increase their rates; the expense to the students must be much greater; and so their use will be much less and their influence will be crippled.

But this formal educational work, though important, is not the most important educational service of magazines and newspapers. Their great effect is in their spread of ideas. They get people to read. Books do not serve so well. There is such a thing as intellectual inertia, and books are not so likely to overcome it. The habit of book-reading is a good habit, but for millions in this country it is a habit hard to cultivate. They will not sit down to a book; they will pick up a newspaper or a magazine. Now, is such reading—call it desultory if you please—really educational? Emphatically it is.

I am not going to say more than a word about the tremendous amount of real information, real education, that the magazines and newspapers give.

You shut off the farm journals, as these proposed zone rates would shut them off, and you decrease the productive power of this country by many more millions.

You shut off such a journal as "The Christian Herald," and you shut off an agency that has raised over four million dollars for charitable and religious organizations in ten years and that, in so doing, has enormously increased the interest of people in giving, which is one of the things that a democracy absolutely has to learn the value of.

You shut off the "Woman's Home Companion," and you shut off an agency that in the last few years has sent out elaborate, personal, expert, individual instructions to over three hundred thousand women on the care of their children—how much do you calculate that one magazine has done to improve the health of the children of this nation?

You shut off the newspapers, with their careful, scientific information about the care of the health, information that hundreds of them are dispensing daily, and you might as well go out and shoot down 10,000 doctors; you would do less actual harm.

You say these newspapers and magazines would not be destroyed by these proposed new laws? You know what would happen—you know that the prices to subscribers would rise, and circulation would narrow—and just who would lose out?

Why, just exactly the people who must have the reading habit if this is going to be a democratic nation—the small town people, the country people. These publications are printed in big cities; the first zone, the cheapest zone, would be in and near those cities. That means you have shut off education just where it is needed. The cities will read anyway; there are many educational opportunities in the cities; but the small towns and the rural districts depend to a large extent on newspapers and magazines.

You shut out those boys and girls, those men and women, from the reading habit. You shut them out from the freest possible circulation of ideas, just at the time when that freest possible circulation is most essential. I say as a college teacher, a man who has been in the educational profession almost a generation, that in my judgment you could hardly stab nearer the heart of the nation than by stabbing at the country circulation of newspapers and magazines; and yet that is exactly where this increase in second-class postal rates, this Zone System, is directing the knife.

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Poultry

Saving Rapid-Fire Layers

By Frank W. Orr

THERE is a penalty for speeding up machinery of any kind beyond a certain danger point. This holds true with the egg machinery of hens. If one is so fortunate as to have a specially heavy-laying strain of hens, the feeding must be more carefully done than when the birds are mongrels or scrubs of ordinary laying quality. There is a tendency among heavy layers, when overstimulated, to speed up their egg-producing organs to a degree that loosens the tension of the tissues that control those organs. The result may be eversion of the oviduct or expulsion of the "egg chute," so to speak.

If the trouble is discovered before inflammation develops in the expelled part, it is often possible to save the life and usefulness of such heavy layers.

A treatment that is often successful consists, first, in cleansing the protruding sac-like organ with clean, warm water. Then anoint the cleaned surface with a little vaseline and replace the oviduct, being careful not to tear or rupture the tissue. To prevent the oviduct from being expelled again immediately, use a home-made sling or support like that shown in the picture. Cut two holes in a square piece of cloth to receive the hen's legs, tie the four corners together, and suspend the hen so she can barely touch her feet to the ground. Keep her in the sling for twenty-four hours, with water to drink but nothing to eat. Afterward feed lightly of non-stimulating feed until the egg-delivering organs have become normal.

Heavy-laying hens fed too much fattening feed and having insufficient exercise are most likely to become afflicted with this trouble.

Turn Food Waste into Eggs

SHOULD all the worthless cats and dogs now consuming table scraps and more valuable food in several million American homes—and farms as well as towns and cities are overrun with such uneconomic canines and felines—be replaced by a half-dozen laying hens for each dog and cat destroyed, there could be added to our food supply three or four hundred million dozen eggs annually, having a food value of at least one hundred million dollars' worth of "red meat." This replacement could be made with little cost, as the expense of dog licenses, collars, chains, kennels, and the like would practically offset the first cost of the hens.

It is only fair to say that there are some dogs and cats that are worth their room and feed; but there are uncounted multitudes of roaming, flea-bitten, starving, bird-eating cats and sheep-chasing, poultry-killing, lawn-destroying dogs that should be supplanted by back-yard flocks of chickens as a war-winning aid.

When the millions of layers that would replace the dogs and cats had completed their year's work, each hen would furnish a nourishing family dinner as her final impetus toward hastening world-wide democracy.

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Farm work is harder on hosiery, of course

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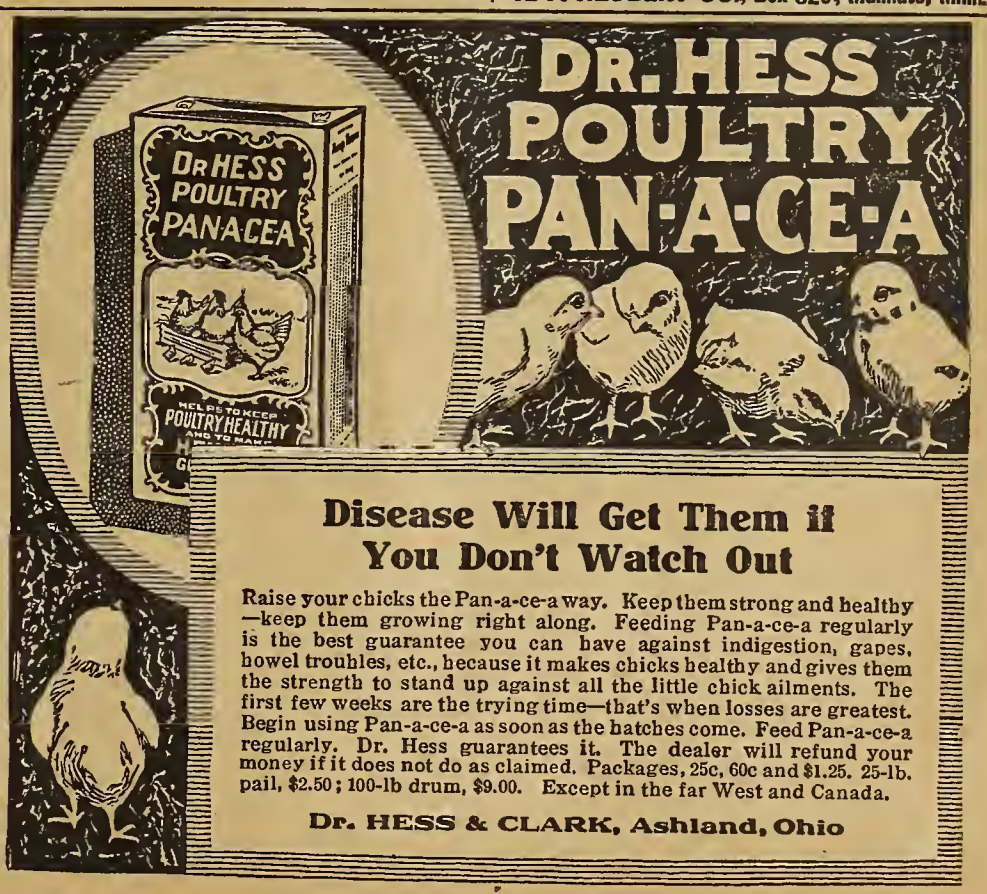

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In the Spy Net

The Mystery About Carl Stackpoole Grows Still Deeper

By EMEL PARKER

A MESSENGER in a gray uniform dashed up the marble steps of one of the government buildings in Washington, ran down the corridor, and knocked loudly on one of the doors. It was opened by a keen-eyed man.

"Sign, mister?" asked the boy.

Slater took the square white envelope, affixed his signature to the book, and closed the door.

"Who was it?" asked Demling, who was short and fat, with a round pink face. The two men were the only occupants of the large office.

"Just a messenger with a special delivery letter," replied Slater.

He read the letter hastily, then with an exclamation dropped it on his desk.

"These women make me sick," he said. "I suppose they get their ideas from the movies."

"What ideas?"

"Another woman thinks she's caught a spy. I'll bet if we've got one letter like this in the last six months we've got five hundred. Gets on my nerves. Now that the chief's gone I have to open all his mail."

"Let's see the letter."

"Help yourself."

After a moment Demling spoke.

"Well, you know I think there's something in this letter," he said.

Slater groaned.

"My son, my son!" he said.

"Well, I do," Demling reasserted. "I think this woman has got hold of something. She doesn't sound like one of those hysterical women — she sounds pretty sensible. Secondly, Slater, that secluded part of the Georgia coast where she lives would be a pretty likely hiding place for anyone interested in our naval secrets."

"Go on," said Slater. "You certainly are a bright boy."

"It's all right for you to laugh, but we know that there's something doing down there. Take the case of this destroyer, the Stepham. I notice the Navy Department lost no time in punishing that boy who wrote that fool letter about the mysterious way she has been wrecked—that letter that some of the Southern papers got hold of and published."

He looked down again at the letter which he held in his hands. "Great Scott, her name is Stepham!"

"Sure it is. That's where you got the idea."

"No, it's not. I think she's got hold of something real."

"Well, what are you going to do—send her a policeman's badge and tell her to arrest the man?"

Demling's round cheeks grew pinker.

"I'd like to give it the once-over, anyway," he said.

"What! Go way down there on this wild-goose chase? I don't see how you could do that even if you wanted to. We don't even know where the chief is—you couldn't very well ask him."

"No, but I can take my vacation and go down on my own hook; and that's what I'm going to do." He looked anxiously at the telephone instrument on the desk. "I had planned to take Mrs. D. to Atlantic City, and I'm afraid she won't like it. Suppose you just call her up, Slater, and tell her I was suddenly called out of town on important business."

"Well, personally I think you're crazy," Slater commented cheerfully. Then he added, with the arrogance of an inferior temporarily in a position of authority: "But don't forget that you said that you were going to do this on your own hook. Understand, the Department takes no responsibility."

"I understand," replied Demling. "Just don't forget to telephone Mrs. D."

ON THE evening after Eugenia had persuaded Sam to row across to the village to mail her letter, she remained so long in her own room that her aunt finally sent Liza in to ask her if she were ill.

This brought Eugenia back to the present with a painful jerk. She had determined upon her course of action in the future, but the present, with its undramatic round of meals and conversation, seemed even harder to bear than the definite crisis she knew was imminent.

She went into her aunt's room with an apology upon her lips, and with leaden sorrow in her heart. It was agony for her to look at Carl Stackpoole, for as their moments together grew fewer and fewer he grew more and more dear to her. She bent her head over her knitting, pretending to be absorbed in it.

Aunt Sarah went on and on with her reminiscences, apparently interpreting her auditor's silence as interest.

At last the man rose to say good night, and Eugenia, waiting only until he had gone down-stairs, prepared to leave.

"Such charming manners!" Miss Burr said as her niece put away her sweater and yarn. "He reminds me more and more of poor Charlie Daingerfield. Eugenia dear, I do hope that you won't think me indelicate, but tell me, has he—has he—ever said anything to you to make you think— Dear me! I don't know how to express what I mean, but sometimes I've thought that he looked at you just as poor Charlie used to look at me before he was killed. Now, Eugenia, don't you laugh at me—I dare say I am too romantic—"

"I'm afraid you are, Aunt Sarah," Eugenia said tenderly. "But you are also a dear."

Bending over, she kissed the invalid's withered cheek and left the room.

"Poor Aunt Sarah!" she thought. "And poor Charlie Daingerfield! But, *oh*, how I envy them!"

Miserably unhappy, she took her place by an open window in her darkened room.

"What's the meaning of all this, Demling?" he demanded sternly

The Story So Far

VERY early one morning, a stranger, ill and drenched with rain, came to Eugenia Stepham's home on a lonely island off the coast of Georgia. He was received and cared for, and he and the lonely young girl were much attracted to each other. Eugenia was happy until she discovered that he was stealing away at night, and came back weary and white in the morning. She became convinced that he was a spy trying to wreck the Stepham, a submarine destroyer on trial near-by. Several sailors had been killed through the work of some unknown enemy.

Within a few moments she saw the familiar crouching figure creeping out from the veranda toward the path that led to the sea.

"And to the hidden box!" she thought.

There was nothing for her to do now but go to bed and to make an unsuccessful attempt to sleep.

The hall clock struck midnight before she detected the far-away sound of an opening window on the lower floor. Then she knew that, as she had supposed, he had not gone farther than the beach.

THE next morning when she awoke Eugenia was astonished to find that the sun was shining and the birds singing quite as if her heart were not breaking.

She was grateful for the beauty of the day a little later, however, for it gave her an excuse to spend the morning in her garden. Her guest sat on the bench beneath the orange tree, smoking, and now and then commenting on her fast-dying rose plants.

Eugenia had determined that in order to avoid suspicion she must endeavor to seem as usual, although this was an arduous task.

"Roses are the most human of all the flowers," she said.

"Roses are more than human!" he replied gravely. "For you can always know that if you treat them well they will come back to you next year."

"And you think that human beings are less faithful?"

"Not less faithful, perhaps, but they have so many interests — interests which conflict with their desires. So often it is impossible for men, at least, to follow the dictates of their hearts."

She knew that he was pleading with her for understanding.

"That is true," she assented. "I suppose that each must do that which seems to him or her to be right. The cruel part of it is that some of us cannot always know what is right."

"But you, Eugenia, you would always know what was right. It seems incredible to me that you can be so young, for your point of view is so mature—you are always so wise and so just."

"I have always been associated with older people; that is the reason."

"No, it is because it is *you*. Eugenia, I would give anything I possess if I could go to you with my problems."

"Can you not?"

"No—no!" he cried. "If I only could! But, no, it is impossible. I cannot think of myself in the matter."

"Nor I of myself," she thought. "How wicked the world is! It creates the illusion of beauty and love and happiness, and then, as one reaches for it, it vanishes."

Both of them lapsed into silence, not to reveal that which lay in their hearts. During the next few days they kept up that stream of meaningless conversation by which people of reserve conceal emotion. Eugenia knew that the man understood as well as she that there must be no silences between them.

She spent almost all of her time with him now, treasuring their moments together as she hoarded the petals of her fragrant roses, so that she might keep some of their perfume after the flowers had died.

Their warm yet restrained companionship lasted only until sundown, however, for Eugenia, young in experience but old in wisdom, knew that to those who love, the shadows of dusk cannot be impersonal—they are either wonderful or terrible.

But on the day when she received by messenger from the mainland a telegram she suggested that they should not go up-stairs for coffee after dinner, but instead go into the library.

"I am grateful for this opportunity to talk to you alone," he said. "There are things that I must say to you, Eugenia. I had intended to wait until tomorrow, but now I must say them—here in this room where I first saw you.

[CONTINUED ON PAGE 41]

Making Refugee Garments

By Ruth M. Boyle

IT IS a strange thought, as we fit some heavy material to a Red Cross pattern for a refugee garment, that this unromantic-looking article is going on a journey of supreme romance, overseas. There is an almost irresistible impulse to make it more beautiful for its great adventure.

And yet, it is in strict adherence to the pattern and instructions furnished that we will best befriend the woman or the child to whom it is going; for it was only after the most painstaking effort to find from every available source what was wanted as well as what was needed in the way of garments by the homeless women and children of Belgium and northern France that these patterns and materials were decided upon.

Did you know that in all probability this very skirt or wrapper will be laundered in some village stream by pounding with stones? Durability and warmth were the determining factors in selecting the materials.

And these patterns conform to the usage of the majority of those persons who will wear them and want to be helped.

It is natural that they do not want now, with life so tragically turned upside down, to have to change, with all the other changes they have had to undergo, the kind of clothes they wear. And so, in making these articles according to the official Red Cross standards, we enter the spirit of the journey that these refugee garments make for us, carrying our sympathy and friendliness where we ourselves cannot go.

The garments most needed are a chemise of heavy unbleached muslin; drawers and petticoat of muslin or outing flannel; morning blouse of dark outing flannel or very heavy galatea; a skirt of any strong, warm material; a house gown of flannel or any other woolen material; an apron of strong gingham; a shoulder shawl, knitted or crocheted of black or dark blue wool; a kerchief, about three fourths of a yard square, of dark-colored, strong material

For men, shirts of outing flannel or flannel, and sweaters with or without sleeves, and either knitted or crocheted, are needed.

Materials for outside garments may be figured, striped, or plain colors, but as the French people have a real dislike for bright colors, particularly at this time, when they feel that bright colors are unsuitable, black, dark blue, dark brown and gray are really the best color selections.

Official Red Cross patterns for these garments may be obtained from the chapters or the leading pattern companies, and material may be secured at chapter headquarters. The work may be done at home if it is more convenient than to work at the Red Cross rooms.

It is very essential that only the very strongest materials be used, since much of the washing is done in streams in the primitive way by rubbing and pounding on rocks.

Because of this many of the garments which were sent in the early days of relief work were useless because they were not made of durable materials.

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EXPERIENCE has taught agriculturists to trust standard products. A name and a brand, backed for years by good service of the goods and good faith of the maker, mean security in purchase and security in service. They safeguard against deceitful appearances.

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Your Child's Own Room

By Mrs. Emily H. West

IN OUR family we have always believed that each child should have a place in the house that belonged to him alone. If possible, he ought to have a room all to himself; if not, he could share it with someone else. But, at any rate, there should be some place to which he could go, and say, "This is my castle," and defend his right to it against all comers. Young people find a good outlet for their overflowing restlessness in taking care of or furnishing their own rooms.

The craving for companionship is a powerful factor in the life of every boy or girl, but a certain amount of privacy and wholesome quiet is just as necessary to the child's development and happiness. I have known families where life was made miserable for everyone because of the constant bickering and quarreling among the children. When the house was enlarged so that each one could have his own room, they suddenly lost their fretful ways, and improved rapidly in disposition, nervous strength, and general health.

It means a great deal to a boy or girl to know that his small possessions are sacred from the unsympathetic eyes and hands of the grown folks. I have always trained my children to respect each other's rights. Even if he hasn't a room to himself, each child has certain shelves, drawers, and other nooks which are sacred to his own use, and neither I nor anyone else may touch any of his little properties without first obtaining his permission.

We all know families where clothes are owned practically in common. Mary buys a new waist, but before she has a chance to wear it Sue finds that she has nothing suitable, and must wear it "just this once." No one is ever sure of collars, handkerchiefs, or stockings.

Mother may clean a pair of white gloves to wear when in town, only to find that Mabel has them. The confusion and bickering which is apt to follow from a haphazard arrangement like this is not the worst result. Many a girl is unpopular at college or boarding school because she has the borrowing habit. She borrows everything—books, money, clothes—and frequently fails to return what she has borrowed, simply because she was not taught at home to respect the rights of others.

If your child has a room to himself, he will take pride in making it beautiful—that is, if you give him full liberty to decorate it as he thinks best. The tastes of children differ widely. You cannot make a boy or an out-of-door, athletic girl love and cherish a dainty pink-and-white room. On the other hand, the room of boyish crudeness and simplicity will chill the heart of a girl whose tastes run to frills and fine needlework.

Then, too, the tastes of a child change as he grows older. A girl may at first show an alarming affection for gaudy posters and sentimental pictures, and may clutter up her dressing table with photographs and useless trinkets, but this is only a passing phase. If she is given a chance she will get over it into the realm of good sense and good taste. A boy whose idea of a good room may be simply a place to sleep and dress will later take pride in turning his "castle" into a comfortable place where he can take his chums and be secure from interruption by the rest of the household.

The fact that young people's tastes change rapidly is a good reason for furnishing and decorating their rooms inexpensively, so that they may frequently be altered to meet the developing ideas of the owner.

I have found that tinting instead of papering is best adapted to meet this requirement in decorating the walls. The walls can be retinted frequently for just about the sum necessary to have wall paper cleaned. One of my sons early showed a decided gift for design, and under the direction of his teacher I permitted him to design stencils to be used to border the walls. The work gave him many pleasant hours, and the result was very attractive.

In the same way I early learned that curtains and furniture should be simple and inexpensive. Stout, home-made furniture is especially adapted for a young boy's room. It will not be greatly injured by the hard usage it receives at the hands—and feet—of its scuffling, awkward, reckless young owner, and since manual training has been introduced into all up-to-date schools, most boys can make a good many pieces for themselves.

While the solid plainness of home-made furniture is, I think, particularly suitable for boys, many girls can make a very dainty, homelike room by its use alone. The illustration at the bottom of the page shows an attic room almost entirely furnished with home-made pieces. The walls are bare boards, but the flowers, bright rugs, pillows, and various feminine touches make it distinctively a girl's room.

The vogue for painted furniture is one that gives the girl almost unlimited opportunities for making her room different and individual. Even cheap chairs and dressers may be made extremely pretty by painting them, and adding a tiny flower design to give character. French gray, dull blue, or cream are good colors for the solid painting, and combinations of blue, red, and yellow in quaint flower designs brighten it up and lend individuality.

A girl who has artistic ability, and whose taste is developed enough, might make her own designs and stencils. In general, however, it is better to buy the stencils, and the girl may apply them herself. If she is not sure of her taste in combining colors, she may simply use a darker shade of the body color. For example, a dresser of dull blue might have a stenciled design in a darker blue.

For some reason the half-grown lads of a household are frequently given the worst quarters. Perhaps it is because they spend much less time in the house and in their rooms than do their sisters, or because they are much hardier. Perhaps it is because they are notoriously hard on furniture. Whatever the reason, the boy between ten and eighteen is apt to be the one who always receives the most undesirable room and the most unattractive furniture. The dresser minus casters or drawer knobs, the bed that sags in the middle, the worn and faded rug, are thought "good enough" for Johnny.

This is a bad policy if a mother wishes to train her boys in neatness, love for their home, and appreciation of beauty—qualities that will go far to make their future homes happy and pleasant.

An attractive room does not necessarily mean a dainty room. Frail decorations, easily soiled draperies, delicate laces and linens, are not for the half-grown boy. He needs furnishings that are proof against soiled boots and dirty hands—things that his guns and skates and fishing tackle will not injure.

He should have a plain, white-enameled bed. If the paint is knocked off, he can easily repaint it himself. He should have a plain set of bookshelves, built-in, if possible, and other shelves for the inevitable collections — stamps, butterflies, stones, shells, coins, all kinds of curios. Any mother of a boy will know that it is useless to protest against the introduction of such "trash." Birds' nests, rocks, and mosses are messy to the eye, but they are often the dearest treasures of the boy who has collected them. If you want your boy's heart and confidence, then beware how you look upon these cherished trophies.

Many boys and some young girls have a passion for red—not rose or maroon, or some subdued shade, but bright Turkey red. There are very few rooms that can stand red walls and still remain pleasing, and, morever, red walls have a bad effect on the nervous system.

It will not do, of course, to refuse to satisfy the child's desire for red. Paint or tint the walls a light gray, and have plenty of red in the curtains, rugs, pillows, pennants, Indian blankets, and pictures.

Many people have the notion that while a mirror may be necessary for a girl, a boy has no particular need for it. The mirror is apt to be the poorest part of a cheap dresser, and it is far better economy to make a dressing table at home and buy a separate mirror of fine quality.

A full-length mirror set in the door of a clothes closet or in some position where the light is good is one of the best aids to developing pride in immaculate personal appearance.

The first picture on this page represents a room which the young man who occupies it has had as his own since babyhood.

As a nursery the room, which is small and narrow, lighted by a double window at one end, had hard-finished walls tinted a pale blue. The woodwork was white. Next to the ceiling was stenciled a gay border of Mother Goose figures. A small cot, a chiffonier, a toy box, and a child's chair and table were the only furniture for several years. A warm blue rug covered the floor.

Later a larger cot and plain, durable furniture took the place of the baby belongings. The bookshelf was constructed to hold the boy's miscellaneous collections and other possessions, and a strong study desk was placed near the window.

The room now shows the combination of athletic and literary interests that absorb the young man who lives in it. It still keeps its simple character, but an air of repose and comfort has replaced the hard-finished walls. The built-in shelves are full of books. Several silver cups, won in athletic contests, a plain, old-fashioned clock, and one or two other ornaments stand upon it. A Remington picture, a sea scene, and pictures of the boy's favorite friends and heroes adorn the walls.

When children are small and the mother selects the pictures, good reproductions of old masters are the best choice.

As the boys and girls grow older, they should be permitted to choose the pictures which they wish to hang in their own rooms. They are bound to be influenced by the ones which hang in other parts of their home, or to which they are introduced at school or in the homes of their friends.

A child's room should really be a kind of home laboratory for developing his tastes, helping him to express his own ideas, and instilling in him ideals of order and beauty.

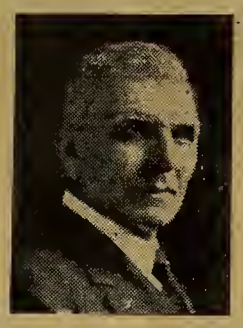
A very small room which has comfort and individuality

Home-made furniture is used in this cozy attic room

Good-Health Talks

Suggested by Questions from Our Readers

By DAVID E. SPAHR, M. D.



A MOTHER brought her boy to my office recently with the assertion that he needed a tonic. She said he was "run-down," nervous, and had no appetite. I asked her what he ate, and she told me he was very "finicky" about his food. He did not eat any vegetables except potatoes, he ate only certain kinds of fruits, and for desserts liked nothing but cake, pie, and ice cream. He would not touch tapioca, gelatin, or fruit-salad dessert. Meat must be fried or roasted; if stewed or boiled he would have none of it.

The difficulty with this child was that he had been allowed to form prejudices against certain foods. Perhaps the first time he had refused a certain food his mother had coaxed him, or she had commanded him to eat it. Either way she impressed upon his mind his momentary prejudice; he had decided that he did not like that food, and had stuck to it. Every time anyone paid any attention to his refusal of the dish, his dislike for it deepened. Thus he became daily more finicky about his meals.

The only way to treat a child of this kind is to make no special dishes for him, keep the menu simple, and pass over his refusal to eat various foods with no comment of any kind. Above all, do not let him "piece" between meals. Give him small servings of everything, and if he refuses a food do not offer a substitute. He will soon learn to accept a varied diet, and will be much better for it.

Infant's Teeth

In what order does an infant's first set of teeth appear? *L. F., Ohio.*

ABOUT the fifth month of a baby's life the process known as the eruption of the teeth begins. The rule is that the lower teeth precede the upper, of the same class, by two or three months. They generally appear in pairs, and the usual order of their eruption is as follows: Upper set—two central incisors, between the seventh and tenth months; two canines, between the twelfth and eighteenth months; two first molars, between the twentieth and thirty-sixth months. Remember that the lower teeth of the same class will be one or two months earlier than the upper ones.

The Milk Diet

For some time I have been troubled with indigestion, and wish to try the milk diet. Which kind of milk is preferable—malted, cow's, cream, or condensed milk? I have a weak stomach, and am fifteen pounds under weight.
J. S., California.

GOOD, pure sweet milk would be the best, if used carefully and moderately, until the system accustoms itself to it. Any one of the different kinds would do if they would agree with you. If they do not agree, try sour milk.

Bunions

I have a bunion on each foot. What can be done for them? They are very painful. Mrs. F. G. K., Washington.

BE SURE your shoes fit properly, and remove any pressure that there may be. Protect the joint with a felt ring. Reduce the inflammation with tincture of iodine, and then apply benzoinated collodion. Soak your feet in hot soapsuds and pare off the thick epidermis. Be careful and don't pare too closely. Repeat the applications of collodion.

Care of Nose and Mouth

IT HAS been thoroughly demonstrated that many of our communicable diseases are transmitted by excretions from the nose and throat. They are also known to invade the system through the open gateway of the nose and throat. It stands to reason, therefore, that if these portals of the system are kept well cleansed, the danger of infection will be materially lessened.

This was demonstrated by a physician in charge of an Indian reservation some time ago. He required the children to cleanse their noses, mouths, and throats with a simple antiseptic solution known as Thiersch's solution. This inexpensive solution is made by dissolving one-half teaspoonful of salicylic acid and three teaspoonfuls of boric acid in one quart of water.

All the children in the school were required to gargle their throats and wash their mouths with this solution, and also to snuff it through their nostrils, in this way cleansing the air passages.

I recommend this procedure to every FARM AND FIRESIDE family, as it is so thoroughly protective in times of epidemics of whooping cough, diphtheria, measles, la grippe, and other contagious diseases.

In the Spy Net

[CONTINUED FROM PAGE 38]

"Do you know—I have never told you this before, but when the lamp shone upon you that morning you seemed to me to be the most beautiful person I had ever seen in all my life! You seemed to me to be everything that I had always wanted. You cannot imagine with what peace I fell asleep, that first day, when you had put me in your father's room. The thought of waking up and seeing you again would have compensated for a thousand shipwrecks and illnesses—for all the sorrows I have ever known or ever will know. And then when I got better I found that you were not only beautiful, with a voice softer and more charming than any I have ever heard, but that you had an extraordinary gift for companionship."

"I've always been more or less lonely. When I was younger I was busy making my own way, and then I got so interested in my work that somehow I've never had much time for ordinary friendships. After I knew you I was glad of it, for you have taught me what companionship could mean. Oh, girl, I am glad that everything I have given you of love and devotion has been totally fresh and new. There has been no one else in my life—you *are* my life."

He jumped to his feet.

"No, that is not true!" he cried. "Would to God that it were! There is something else in my life. It is not a person; it is more relentless than any person. Now it is standing between you and me, grinding my love for you, obliterating my chance for happiness. It is my work."

He dropped into a chair beside her and put his hand over hers.

"Can't you tell me?" she asked gently. "I shall try so hard to understand."

"That's the whole trouble!" he exclaimed. "I can tell no one—not even you, whom I trust above all others."

"Don't tell me if you ought not to. But if there is anything you can tell me, perhaps it would help—both of us."

"Yes, it would help," he agreed. "I have been selfish. My own grief has made me forget you, and yet it is primarily because of you that I am sad. Listen, Eugenia! I have never told you of my work because I could not. It is necessary work, vital work, for my country. I cannot tell you of it, yet it is honorable work—you must try to believe that. It is true that I was ill when I first came down here, yet I chose this part of Georgia, not because of my illness, but because of my work. My name is not Carl Stackpoole. It hurts me every time I hear you call me by that name; yet my work demands that I should not tell you my real name. To do my work well a man has to be a cold-blooded machine. I am not that—sometimes I wish I were."

[CONCLUDED IN NEXT ISSUE]

Sleep-Meter of Westclox

THOUSANDS of people already know Sleep-Meter of *Westclox*—the business-like brother of Big Ben. He's telling time today in several rooms of many homes.

Sleep-Meter starts the day and sees it through. He runs the household on schedule time by setting a good example.

Sleep-Meter is five inches tall, has a cheerful-toned gong and an easily read dial. He's good to look at and good to depend upon: he's downright good all through.

Like all *Westclox*, Sleep-Meter has that same patented construction which enabled Big Ben to succeed. In this better method of clock making, needle-fine pivots of polished steel greatly reduce friction. All *Westclox* run and ring on time.

That's why *Westclox* are known as *success clocks;* that's why they make friends and make good.

See Sleep-Meter at your dealer's. Look for the family name—*Westclox*—on the dial. If your dealer cannot supply you, Sleep-Meter will be sent prepaid on receipt of price: $1.75; in Canada, $2.50.

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do away with all rubbing and scrubbing. Next washday use 20 Mule Team Borax Soap Chips this way:

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Send No Money

Keeps Household Accounts

By JANE MACPHERSON

SINCE the cost of living has advanced so rapidly in the last few years, much attention has been paid to reducing certain items of expenditure. Such efforts are more or less futile unless we are able to draw deductions to aid us in the future.

I believe every housewife should keep accounts. She should know just what is spent each month for food products. The budget is a practical means of reducing expense.

There is a great advantage in marketing in person, and there is nothing more important than the utilizing of the leftovers in planning the meals for the day. It goes without saying that the selection of foods that give the greatest nutritive value for the least outlay is a step in the direction of economy.

The average housewife will reduce expenditures by keeping accounts each month of amounts spent for various food products. By comparing accounts for several months it will be possible to obtain the average amount spent for groceries.

This tends toward the keeping of budgets, and is the means of regulating family expenditures, as opposed to the haphazard methods of the past. It is possible to find what food products are most expensive and make some definite plan to lessen the expense.

Since meat makes up a large part of the ordinary family diet, any economy in the purchase of it will make a noticeable reduction in the food bill. By using meat substitutes which are less expensive, but as nutritious, the amount paid for meat is greatly reduced.

The use of cheese which is rich in protein as a meat substitute will prove satisfactory. Since cheese is a concentrated food, less is needed to furnish the necessary food requirement. Nut loaf is also an excellent substitute for meat, since it adds variety to the diet and is rich in protein.

I find a great advantage to market in person. The housewife may see the foods before purchasing them. In this way it is possible to get the best that is offered for the price.

I always weigh articles that are sold by weight. In case the grocer gives short weight it should be discovered. Although the difference may be small, in a year's time it counts up, and the housewife has paid a certain per cent of her allowance without any return.

Boy's Knitted Sweater

HERE is a good-looking boy's woolen sweater which is very simple to knit. For complete directions send four cents in stamps to the Fancy-Work Editor, Farm and Fireside, Springfield, Ohio. Order No. FC-102.

Cheese for Conservation

By Flora G. Orr

TO MAKE cottage cheese, add rennet to sweet skimmed milk or use milk which has soured, forming a thick clabber. Keep milk at body temperature, about 96 degrees F. This is easily done by setting the milk into a pan of warm water. After the milk has remained at 96 degrees F. for ten minutes, chill thoroughly, as this will cause the cheese to retain more of the fat. Pour the mixture of whey and curd into the draining cloth. This may be a sheet of cloth stretched over a simple draining rack made for the purpose. Leave mixture in cloth for half an hour, then work with spoon to remove as much of the whey as possible. This whey is of great value in bread-making, and should not be thrown away. Fold ends of draining cloth to make sack for cheese, and press between heavy weights or an especially constructed cheese press. Add salt to taste, chill, and serve. If the temperature of the milk rises above 96 degrees F. during the process, a tough, stringy mass results. In such case the cheese may be put through the meat grinder.

If you like variety, chopped parsley, caraway seeds, chopped olives, or pimentos may be added to the cheese.

BUTTERMILK CREAM—This is not exactly a cheese, but it is very delicious and makes a very good substitute for butter to use on the war breads. To make it, heat the buttermilk to a temperature of about 98 degrees F., but in no case allow it to go above 100 degrees F. Continue heating at this temperature for about twenty minutes, and drain as for cheese. A product the consistency of thick cream is obtained.

CHEESE NESTS—One-fourth cupful cheese, one tablespoonful jelly or preserves. On individual plates for serving form nests of cheese salted and flavored to taste. Fill the center with jelly or preserves and serve.

BUTTERMILK CHEESE — Heat buttermilk gradually to about 130 degrees or 140 degrees F. Chill, strain through draining cloth, and press between weights as with cottage cheese. This cheese has a very smooth consistency and combines nicely with olives, pimentos, caraway seed, chopped nuts, or parsley.

CHEESE ROLLS—One cupful mashed bean pulp, one cupful cheese, bread crumbs. Combine bean pulp with cheese, and add bread crumbs until the mixture is thick enough to form into a roll. Sauté and serve like meat balls.

CHEESE AND CARROT SALAD—One cupful cheese, one cupful grated carrots, salt. Carrots may be put through the meat grinder. Combine with cheese, season, shape into small cones. Place on lettuce leaves and serve with mayonnaise dressing.

Substituting for Sugar

By Lula Richmond

HOOVERIZE by substituting honey, molasses, or some syrup for sugar. Here is a recipe for honey muffins, in which all the sugar is replaced by honey. They are easily and quickly prepared and I find them appetizing. Use: One-half cupful honey, one cupful flour, one-half teaspoonful soda, one-fourth teaspoonful salt, two cupfuls bran, one tablespoonful melted butter or oleomargarine, one and one-half cupfuls milk, three-fourths cupful finely chopped parsley, English walnuts, if desired. Sift flour, soda, and salt together, and mix with bran. Add other ingredients, and bake twenty-five to thirty minutes in a hot oven. This recipe makes twenty muffins. Quick breads of this kind may be served at luncheon, supper, or breakfast.

Crisping Cereals Without Oven

TO MAKE cereals crisp without the time and expense required to heat a big oven, use an ordinary corn popper in the ordinary way. Any of the popular varieties of cereals may be crisped in a few minutes, with constant watchfulness to prevent scorching.

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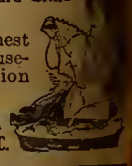

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FOR KITCHEN. Oil the washing machine, coffee grinder, ce cream freezer with 3-in-One. 3-in-One prevents ed rust forming inside oven of gas range or on any panned or black parts—stops tarnish on nickel rfaces. Prevents rust on metal refrigerator shelves. eaves no odor or grease or residue of any sort.

FOR DINING ROOM. Wring out soft cloth in cold ater. Apply a few drops of 3-in-One. Go over surce of dining-room table, chairs, sideboard, buffet, ina cabinet. Wipe thoroughly. Rub briskly with ry cloth. Greatest cleaner and polisher ever dis-overed.

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Salt River Valley, southern Arizona, under Roosevelt Dam. Raise alfalfa for feeding cattle and sheep. aise vegetables and fruits for early Eastern market. uy land now, before it costs more. Deep soil, assured water, asonable prices, fine winter climate. Write for our Salt iver Valley folder free. C. L. Seagraves, Industrial Commissioner. Santa Fe Ry., 1943 Railway Exchange, Chicago.

SOLVE THIS PUZZLE

Get a Beautiful Prize

1	3	1	= ?
2	3	1	= ?
3	2	2	= ?
?	?	?	

In the diagram above there are nine squares. Each square contains a number. If you can change the numbers around so that every column will total six, I will send you a Beautiful Prize. Every column, both up-and-down and sideways, must equal 6.

GET A BICYCLE
I want bright boys and girls to join my Bicycle Club. If you can solve this puzzle, you prove that you are bright. A Valuable Prize for every correct answer. I have only a few left, but while they last I will send one free to every boy or girl who solves the puzzle.

SEND YOUR ANSWER
I will also make every boy or girl who sends correct answer a member of my Bicycle Club. I will show them how to get a bicycle by doing a little easy work. Send your answer today. Enclose 4c in stamps to cover cost of packing and mailing the Prize.
Address Sec'y Bicycle Club, Dept. B
FARM AND FIRESIDE SPRINGFIELD, OHIO

Rings Learns Caution

By F. E. BRIMMER

IF YOU had red hair, freckles, and a puggy little nose, you wouldn't like to be reminded of it. Neither did Rings Raccoon enjoy it a bit when Timid-heart Deer, or any of the wood-folk, sneered at his unusual tail. Everybody, including his brothers and sisters, had poked fun at that tail ever since the day when he first came out in the bright sunshine on a limb just in front of his home hole in the hollow beech. Of course, all Raccoons have ring tails, each carrying seven dark rings. Since Rings had eight, he was different from the others, and so everybody laughed.

Then Rings was not like his brothers and sisters in many other ways. Besides being willful and disobedient, he thought he knew more than Moms or Pops Raccoon. This may have been because everyone laughed at his eight-ringed tail and made him feel spiteful. Also, he was larger and stronger than the others, and quicker to learn how to climb and hunt. Fear and precaution he did not know.

At ten weeks of age Moms Raccoon thought it time to begin teaching the

children their wood ways. On a bright full-moon night Pops Raccoon returned from scouting to report that no danger signs were near, and the happy family tumbled down the home tree to the ground. Up the creek ten rods was a swamp, and to this Moms led her children. At first they were afraid because the clods of mud did not stay on the ground, but jumped here and there, Splash! Splosh!

Moms soon caught one of the leaping clods, and then the children saw that it was not mud at all—it was a frog! Mmm! How good he smelled. However, Moms would not let them taste the frog dinner until she had taken it to the water and carefully washed the mud off.

RINGS began feeling and probing about in the mud, imitating the way that he saw Moms fish, and soon caught a pollywog. "Ho! Ho! Look here!" he shouted, and began to devour his dinner. But the first muddy mouthful was enough, and he spluttered it out. Everybody laughed, and Rings felt very much ashamed, but he never forgot to wash his food after that.

Everything went well with the training of the youngsters until one day Pops discovered that Old Mike was setting out his steel traps up and down the creek to catch mink, muskrat, and raccoon. For three days Moms did not take her school out for a lesson, and Pops spent most of the night-time looking for a safe new home.

The children became very impatient, and most of all Rings. He could not understand what frightened Moms so. Why not go down to fish and frolic upon the ground? Who was afraid? He wasn't.

The fourth night of home-staying was too much for the patience of Rings. He sneaked down the tree and ran away up the creek to the swamp where frogs sprang out into the water at every step. While eating his first catch, a stranger swam across the pond and landed near him. The visitor had a long slim body, almost like a snake, with four short legs. Rings was not afraid because the slim, brown animal smelled of water, woods, and frog dinners; and then, too, the stranger was a great deal smaller than any of the Raccoon family.

"Howdy! Who are you?" growled Rings, sticking up the hair on his neck and back as though he expected to meet an enemy.

"Save your temper. I'm Minnie Mink," replied the newcomer. "My home is right over across the pond in the bank among the rocks, and so I've seen you fishing around this swamp before. You better run home quick. All about here are Old Mike's traps."

"Pooh! Who's afraid of Old Mike? I'm not!" and at that Rings began probing and feeling about in the mud, squeezing it out between his fingers. Finally he found something hard that had two round parts and felt hard as bone. He dragged it to shore to examine it carefully. In the center was something that smelled ever so tempting. It didn't seem a bit alive.

SUDDENLY Rings decided to eat this delicious scented morsel. But when his handy paw touched the thing, something went Snap! At once the hard object was hanging to his toes and pinching like everything. Jump and pull as he might, it clung tightly with its smarting grip.

Rings became thoroughly frightened, and shouted the 'coon call for help. Pops Raccoon just happened to be returning from his home-searching trip by way of the swamp, and rushed to the disobedient youngster. Rings was jumping up and down in fear and pain, shaking his aching paw.

The wise parent knew just what to do as soon as he saw that it was a mussel clam—not Old Mike's trap—that was pinching his son's toes. Quickly seizing the hard thing in his teeth he crushed the hinge side, and the clam fell to the ground.

But this did not end the trouble. No sooner was Rings free from the clam's pinch than Pops Raccoon began to spank him soundly. Plunk! Plank! Spank!

Down-stream Rings ran as fast as he could go. Right behind him came Pops, and every jump he gave the youngster a 'coon-sized spank. Up the beech tree hustled the naughty Rings, and right at his heels ran Pops, fairly making the home tree shake with the spanking blows he gave to disobedient Rings.

Are the Sweet Stars Flowers?

By Saidee Gerard Ruthrauff

ARE the sweet stars flowers growing
In the Garden of the Sky?
And are there stems on the backs of them?
And can you tell me why
They bend their faces down all night?
Is it to give the fairies light?

New Puzzles

Initial Change

That *one* a villian proud, we see;
No *two* was his but bitter *three;*
He *four* his body would have *five,*
In death, in *six* to be alive!

Twisted Titles of Famous Fiction

1. Stole sad pair. 2. Tell street car. 3. Fain vary it. 4. Work lineth. 5. Learn, Sir Sam 6. Think of sly glide. 7. Wravel in pink. 8. Twist of a cole tie.

Answers to Puzzles

Puzzles Printed Last Issue

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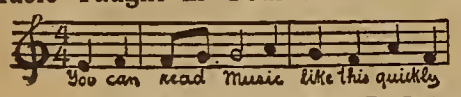

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Looking Your Best

What You Can Easily Do to Reduce Your Weight

By MARGARET DRUMMOND

ONE of the popular writers of the day wrote recently that women nowadays can be roughly divided into two classes: the women who are trying to get fat, and the women who are trying to get thin. This remark is quite true, judging from the many letters that come to my desk from women who are either under weight or over weight, and who want to find out how they can attain the perfect figure that is the desire of every woman.

First of all, find out what your height in your bare feet is, and then look at the table of weights and see what you ought to weigh. Getting thin is a question of diet, rest, and exercise.

You must make up your mind to give up starchy foods, sugar, rich sauces, gravies, and of course all alcoholic liquors. Eat plenty of green vegetables—prepared without butter, oil, cream, or milk—and fresh fruit. The best vegetables are spinach, onions, string beans, lettuce, celery, watercress, cabbage, asparagus, cauliflower, tomatoes, and radishes.

Start the day with a glass of lemonade without sugar. For breakfast eat one strip of bacon or a little ham with dry toast or dry roll without butter, and tea or coffee without sugar or cream.

For lunch eat a little fruit—apple, orange, peach, or pear. If you have been accustomed to a hearty lunch, taper off gradually to the fruit lunch by having a cup of clear broth without fat, and a vegetable cooked without fat. Bread must be dry or stale.

For dinner eat lightly of beef, mutton, or fish (no pork); but satisfy your appetite with vegetables and a slice of bran bread. If you must drink coffee, drink it without cream or sugar.

If, between meals, you feel the need of something, take a glass of buttermilk or lemonade, and sip it slowly. This is

The bending exercise keeps every muscle active

the régime for the woman who is just a little over weight and who wants to get into condition.

To the woman who is very much over weight and wants to reduce, I say: Avoid bacon, ham, pork, and the fat of any meat; also cereals, breakfast foods, bread and biscuits, potatoes, corn, rice, macaroni, lentils, milk, cream, butter, cheese, olive oil, rich pastries, cakes, deserts, candies, ice cream, and soda water.

The things she may eat are: Roast beef, steak, mutton, lamb; all kinds of meat except pork in any form; all kinds of game, fish, lobsters, clams, oysters; fruit; most vegetables without cream or oil dressing, mushrooms, tomatoes, cucumbers, celery, pickles, olives, string

Reducing the waistline and hips

beans, spinach, cauliflower, Brussels sprouts, beets, carrots, squash, endives, artichokes, radishes, lettuce, parsnips, onions, asparagus, and almost every other green vegetable.

Eat in moderation, and do not drink with your meals.

The next question is exercise. Before exercising, practice deep breathing. It will cleanse the whole system and put you in condition for any of the exercises. Stand in front of an open window, or in the open air if possible, warmly clad and without corsets or any restricting bands, and fill your lungs to the full with pure, fresh air. Inhale and exhale slowly, so that all the lung air cells are fed. While doing this, place the hands on the hips and stand squarely on the feet with your head held well up.

In carrying out the following exercises, which I think will meet all demands, it is best to wear very loose clothing, so that the muscles have absolute freedom of movement. At first, exercises will tire you; but with daily practice you will soon become accustomed to them, and once started you must not neglect them for a single day.

If you have a household to take care of, the sweeping, dusting, cleaning, making beds, and getting meals will all help with the good work that you are doing. After exercising take a hot and cold shower bath, followed by a vigorous rubbing, and lie down for a few minutes. If the shower bath is not possible, use a big Turkish towel wrung out of hot and then cold water. This will prevent lameness of the muscles.

To reduce the back, abdomen, and double chin, lie flat on the back with the crown of the head touching the floor. Raise the head until the chin touches the chest, keeping the heels and the shoulders on the floor. Do this three or four times, at first slowly, increasing the number of times as you get used to it and according to the amount of fat you want to lose.

To reduce the waist, side, bust, and fat under the arms, stand straight, with

What You Should Weigh

Ages:	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50 over
4 ft. 11 in.	111	113	115	117	119	122	125	128
5 ft. 0 in.	112	114	117	119	122	125	128	130
5 ft. 1 in.	115	116	118	121	124	128	131	133
5 ft. 2 in.	117	118	120	134	127	132	134	137
5 ft. 3 in.	120	122	124	127	131	135	138	141
5 ft. 4 in.	123	125	127	130	134	138	142	145
5 ft. 5 in.	125	128	131	135	139	143	147	149
5 ft. 6 in.	128	132	135	139	143	146	151	153
5 ft. 7 in.	132	135	139	143	147	150	154	157
5 ft. 8 in.	136	140	143	147	151	155	158	161
5 ft. 9 in.	140	144	147	151	155	159	163	166
5 ft. 10 in.	144	147	151	155	159	163	167	170

Mother: Keep a jar of Musterole handy

Goodness Gracious! Everybody coughing and how are we going to *get at the trouble* 'way inside? "A good old-fashioned mustard plaster," says somebody. Fine—if only it would not blister!

How about Musterole? The very thing! Give us that pure white ointment. Rub it in *over* the place. It won't blister. And can't you just feel how it gets down underneath the skin and *starts to work?*

Musterole is made of oil of mustard and other home simples. Just rub it on the skin. It *penetrates to the seat of the cold* and there generates heat. But it is a peculiar non-blistering heat.

A few minutes after you have applied Musterole you feel a delighting sense of coolness. And relief is usually prompt.

Musterole comes in 30c and 60c jars—hospital size $2.50 at all druggists. The Musterole Co., Cleveland, Ohio

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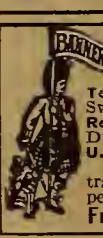

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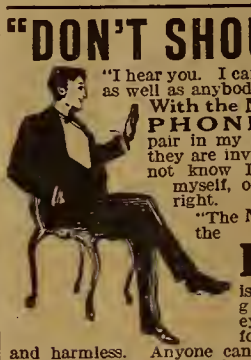

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the arms raised high over the head and knees stiffened. Bend the body from the waist only, and try to touch the floor with the tips of the fingers of the hand you use. Repeat the exercise with the other hand. Start doing this five times, morning and evening, and increase to fifty.

To reduce the abdomen, thighs, calves, and ankles, the "squatting" exercise is the one to use. Stand perfectly straight, with heels together and toes apart, the hands resting on the hips. Rise on the toes, then sink the body to the floor, bending the knees until the thighs and legs are doubled on each other and the entire weight is supported by the toes. Keep the body quite stiff. Return to the original position. Repeat five or six times to start with, and then gradually increase the exercise to thirty or forty.

While taking these exercises, remember these things: Walk every day one, two, or three miles; always have a bath or a rub-down after finishing; and never forget the diet part of the treatment. Other things to remember are: Never sit down when you might just as well stand; walk rather than ride, when possible; deny your taste for candies and rich foods; don't stay in bed when you are wide awake and have had all the sleep necessary.

It is in your hands to reduce your weight; and if you think you are too fat, get thin!

A Social for Soldier Boys

WHEN one soldier boy who was stationed in a camp near his own town came home on leave, bringing five lonely pals with him, his hospitable sister planned a jolly supper party which undoubtedly owed its success to its "hominess." Certainly its friendly informality accomplished more than any large outlay in money could have done.

Five other girls were invited, so that there were an equal number of girls and men.

To begin with, the hostess passed around to the girls slips of paper and duplicate slips to the men.

Each slip contained the name of some article of food for supper, and the man and girl who drew duplicate slips were delegated to prepare that dish.

When all had matched up partners, they repaired to the kitchen. The hostess and her partner did no cooking, but announced that they would manage his cafeteria.

While all the others were in the kitchen, they arranged on a side table in the dining-room stacks of tin trays, knives, forks, spoons, and paper napkins. Over it they posted a bulletin board in good imitation of a real cafeteria. There were listed on it the five dishes which were being prepared, and as a joke a number of others—quite impossible to cook at such a time—all of which were then heavily crossed off.

When the cooks had finished their tasks—and the cheerful uproar that accompanied their occupations may be easily imagined—the food was arranged on a long kitchen table. Thereupon each person after possessing himself or herself of a tray and the required silver, and scanning the menu posted, passed on and pretended to select from the counter. In reality, of course, everyone took everything, and received a check from the hostess with a punch against some "stunt" written on it.

The menu read as follows:

SCALLOPED SALMON
FRUIT SALAD
LETTUCE SANDWICHES
CHOCOLATE PUDDING WITH WHIPPED CREAM
TEA OR COFFEE

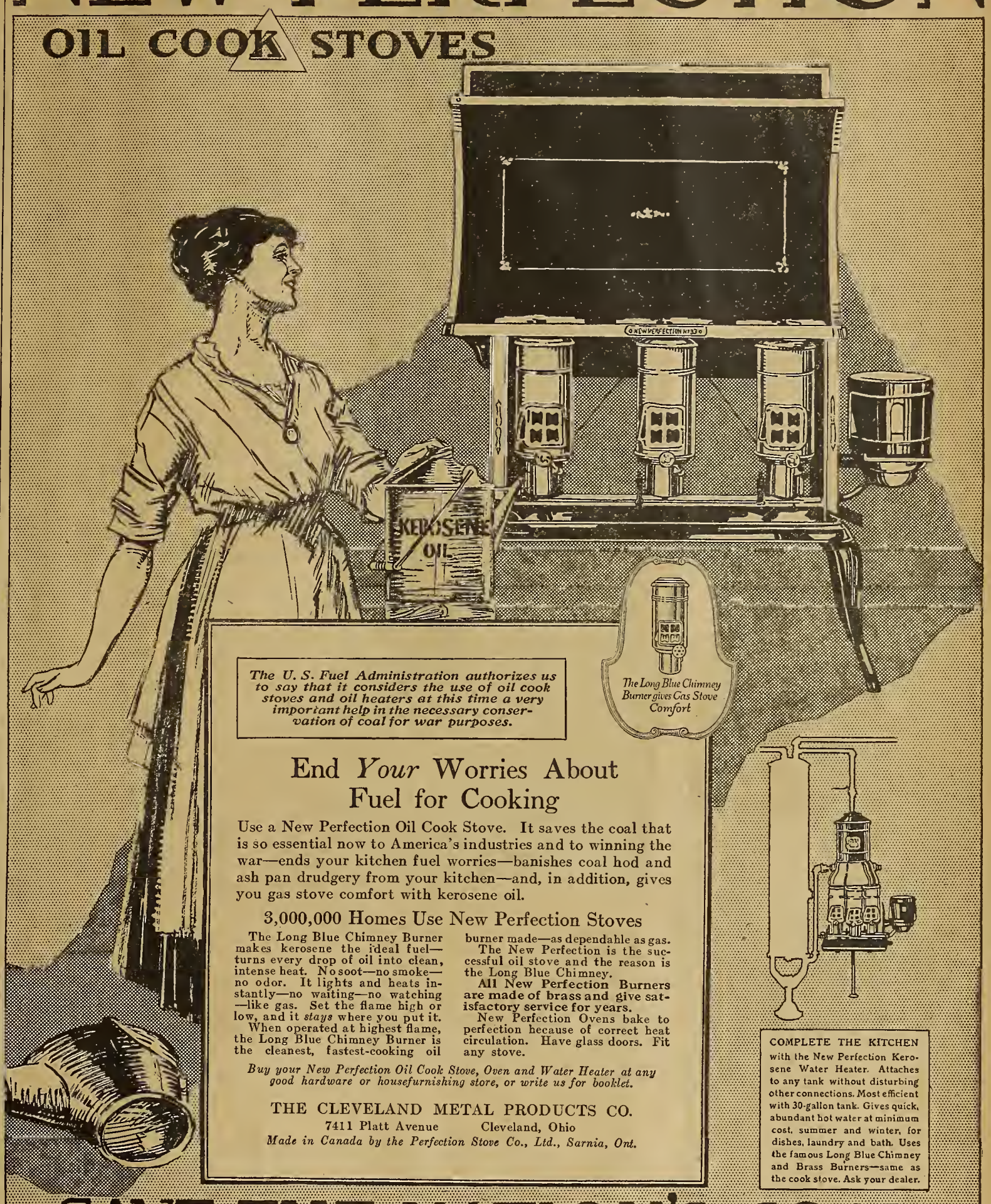
Two tables were left bare in the dining-room, and the company chose seats where they wished.

A great deal of additional fun was gained upon finding that someone had surreptitiously set up a placard on one of the tables reading, "Reserved for ladies." Over the cold-water faucet was a sign reading, "Water," and glasses were grouped near it.

After supper the various stunts registered on the checks and some rollicking songs filled the remainder of a merry evening in which there had been absolutely no chance for stiffness from beginning to end.

NOTE: A list of "stunts" for such a party can be obtained by sending a stamped self-addressed envelope to the Entertainment Editor, FARM AND FIRESIDE, Springfield, Ohio.

NEW PERFECTION
OIL COOK STOVES



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New Perfection Ovens bake to perfection because of correct heat circulation. Have glass doors. Fit any stove.

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SAVE THE NATION'S COAL

One Worked in a Sand Quarry

IN THE picture to the left are shown six Pennsylvania boys, all from the same town, who have worked out a fine opportunity for themselves. They are earning an average of $50 a week each, acting as representatives for FARM AND FIRESIDE. Four of them are brothers, Walter, Harvey, Elmer and Jacob Kaley. The others are William Woodruff and Frank Bennett.

None of these boys had any special training for the work. One of them, Frank Bennett, was working in a sand quarry for small wages. It was by chance that he happened to join the crew. Another, William Woodruff, was driving a tea wagon. Walter Kaley, the organizer, was a machinist before he discovered the opportunity. And this is the history with all of the boys.

What they have done you can do. If six chance friends, all without experience, all without training, can jump right in and make $50 a week, each, surely you can do likewise. With the wonderful new offer which FARM AND FIRESIDE is now making, *You Positively Cannot Fail.* Nothing is required but *The Will to Succeed.* If you have it, send us your name and address.

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Real radium in the substance on the hands and figures of the Ingersoll Radiolite glows the correct time as clearly in the dark as in the day—as long as you carry the watch.

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Western Canada has an enormous acreage to be seeded but man power is short, and an appeal to the United States allies is for more men for seeding operations.

Canada's Wheat Production last Year was 225,000,000 Bushels; the demand from Canada alone, for 1918, is 400,000,000 Bushels.

To secure this she must have assistance. She has the land but needs the men. The Government of the United States wants every man who can effectively help to do farm work this year. It wants the land in the United States developed first of course; but it also wants to help Canada. Whenever we find a man we can spare to Canada's fields after ours are supplied, we want to direct him there. Apply to our Employment Service, and we will tell where you can best serve the combined interests.

Western Canada's help will be required not later than April 5th. Wages to competent help, $50 a month and up, board and lodging.

Those who respond to this appeal will get a warm welcome, good wages, good board, and find comfortable homes. They will get a rate of one cent a mile from Canadian boundary points to destination and return.

For particulars as to routes and places where employment may be had, apply to

U. S. Employment Service, Dept. of Labor

The Well-Dressed Woman

Miss Gould plans for her these smart spring clothes

No. 3461

Stylish in plain material combined with plaid or striped. No. 3461—Shirt Waist, High or Low Collar. 34 to 42 bust. Pattern, fourteen cents.

A smart separate skirt in wool or cotton. No. 3462—Diagonal Panel Skirt, Belted at Sides. 24 to 32 waist. Width, one and three-fourths yards. Pattern, fourteen cents.

No. 3382 No. 3462

No. 3461, with collar low

No. 3461 No. 3486

GET your spring dressmaking done early, with the help of these patterns. Order from Pattern Department, FARM AND FIRESIDE, Springfield, Ohio.

A good-looking separate skirt always comes in handy—No. 3462

Slip-on Sleeveless Coat—No. 34[illegible]

No. 3486—Slip-on Sleeveless Coat. 16 and 18 years and 36 to 40 bust. May be of wool or cotton jersey trimmed with yarn or fine cotton. Pattern, fourteen cents.

No. 3469—Dress with Kimono Sleeves and Drapy Tunic. 16 and 18 years and 36 to 40 bust. Width two yards. Pattern, twenty-five cents.

No. 3495 No. 3496 No. 3469

Cap—No. 3382

Official Uniform designed for women of U. S. Food Administration. No. 3382—Adjustable Dress with Detachable Cuffs and Cap (also suitable for apron). 32, 36, 40, and 44 bust. Pattern, ten cents.

No. 3469 is a charming graduation frock in voile, net or organdie

No. 3495—Eton with Yoke and Kimono Sleeves. 34 to 40 bust. Pattern, fourteen cents.

No. 3496—Panel Skirt with Deep Belt. 24 to 30 waist. Width, two yards. Pattern, fourteen cents.

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This is Your Last Opportunity

To Get One of Our Rose or Berry Collections

ROSES You Can GROW

These Offers are Good Only in the United States

Selected especially for FARM AND FIRESIDE READERS

THIS is our last offering for this season of our famous Rose and Everbearing Berry collections. Thousands of FARM AND FIRESIDE readers have received these collections during this and past seasons and their satisfaction is evidenced by the many letters of approval we receive.

Our 1918 Rose Collection

OUR rose bush collection for this season comprises six carefully selected varieties each one of which has been thoroughly tested for its blooming qualities in all localities. We heartily endorse them as among the best of the hardy everbloomers for general planting. We send your collection under our usual FARM AND FIRESIDE "Satisfaction, or Money Back" guarantee.

Guaranteed to Grow and Bloom

THE plants we offer you are one year old, own root, pot grown bushes, which may be transplanted at any time without checking their growth or injuring their blooming qualities. They have not been forced to flower, but have been especially grown and stored in cold houses where they rest as nature demands. When delivered to you they will be in proper condition to plant and will take root and begin to grow with the first days of spring. We will ship them to you at the proper planting time for your section. This will be approximately as shown by the planting schedule below.

Table for Planting Rose Bushes

Latitude of Tex., Calif., Fla. . .Feb. 1
Latitude of Ariz., Okla., S. C. Mar. 1
Latitude of Wash., Tenn., Va. Mar. 15
Latitude of Nev., Kan., Mo. . . Apr. 1
Latitude of Iowa, Ohio, W. Va. . . . . Apr. 15
Latitude of Mont., Mich., N. Y. and all N. E. States. . May 1

Description of the Varieties

These varieties are all everbloomers. The colors range from a deep red through shades of pink, white and yellow.

1 Red-Letter Day A fitting name for this brilliant colored rose. Its velvety, glowing, scarlet crimson buds and flowers are the most pleasing shade and this rich deep hue is retained as long as the flower lasts. Cactus shaped, moderately full flowers are produced freely and continuously.

2 Rhea Reid A most beautiful and thoroughly distinctive rose. It is a strong, healthy grower. The color is a vivid scarlet crimson and the flowers are very large, full and of perfect form with high center. An invaluable decorative rose; fragrant, and in every respect adapted for garden planting.

3 Radiance Radiance is one of the greatest rose creations of modern times. Vigorous in growth. Flowers of immense size are produced in masses, the color is a beautiful blending of carmine rose shades with opal and coppery reflections, extremely brilliant in effect.

4 Dorothy Perkins One of the most valuable climbing roses of the hardy varieties. It produces immense clusters of large perfectly formed roses. The color is an exquisite shade of clear shell pink, deepening to a darker shade near the center. Foliage is extraordinarily beautiful, the richest deep green in color.

5 Melody This rose is the result of years of effort to produce a genuinely yellow rose in the hardy everblooming type. It grows to perfection in any ordinary garden soil. The color of the flowers is a lovely shade of yellow, deepening to apricot in the center.

6 White Cochet A most magnificent snow-white rose; of vigorous growth and profuse blooming qualities. It is absolutely hardy in every part of the country. The buds are large, full and firm, elegantly pointed, the magnificent pure white flowers open perfectly double and possess an exquisite fragrance.

Six Everblooming Strawberry Plants

OUR strawberry collection consists of *Six Progressive Variety Everbearing Plants.* Anyone having a garden can find space to grow this wonderful strawberry. It is a proven success in almost any soil. Given a little attention, these vines will produce ripe fruit within six weeks after the plants are put in the ground. Blossoms, green berries and ripe berries are frequently seen on a plant at the same time. Progressive Strawberries are often picked after snow has fallen. The berries are of beautiful form and color and delicious in flavor. *Shipped at planting time in your locality.*

Six Everblooming Raspberry Plants

ALL that we have said about the Progressive Strawberry applies also to our collection of *Six St. Regis Everbearing Raspberry Plants.* This is the only variety of raspberry that will yield fruit the first season planted. Set out in early spring, they will give you ripe berries by June and will produce continuously until October. The berries are full, firm and of delicious flavor. In color they are a bright crimson. This berry will grow in all soils and is absolutely hardy. Our collection will supply the ordinary household for table use and canning. We absolutely guarantee the bushes to grow if given proper attention. *Shipped at planting time in your locality.*

About Shipping

Unless you instruct us otherwise, we will ship in accordance with the table appearing on this page. If you want your collection immediately, be sure to state so explicitly.

OUR LIBERAL OFFERS

Send 75c And we will enter or renew your FARM AND FIRESIDE subscription for *Three* years and send your choice of berry or rose collection *postpaid.*

Send 50c And we will enter or renew your FARM AND FIRESIDE subscription for *One* year and send your choice of collections *postpaid.*

Or You Can Earn a Collection

The easiest way to get one or more collections is to get up a club of subscribers to FARM AND FIRESIDE. For one club of *three* subscriptions at 25c each we will send you postpaid *one collection* and for each additional club of *TWO* subscriptions at 25c each we will send you an *additional* collection.

Address your order to

FARM AND FIRESIDE, Springfield, Ohio

Last Chance Offer Coupon

FARM AND FIRESIDE, Springfield, Ohio FF141

Gentlemen: For the enclosed $..... please { extend / enter } my subscription to FARM AND FIRESIDE for ..... years. Also in accordance with your offer in April FARM AND FIRESIDE, send me

_____
(State which collection you want)

Name .....

P. O. .....

St. or
R. D. No. .....State.....

Note: If you are already a subscriber to FARM AND FIRESIDE you can send your renewal order now and your new subscription will be extended from the expiration of your old one. Be sure to have your order in by April 20th, at the latest.

Overland

TRADE MARK REG.

The Thrift Car

Now is the time to get your Overland car

"Since McCormick invented a reaping machine, no other invention has been so beneficial to farmers as the automobile."

And when it comes to farmers' wives, what *compares* with the automobile?

The fact that farmers have bought 60 per cent of the cars we have built, we consider the greatest evidence of their value.

For farmers, above all other business men, need and look for those qualities of performance on which Overland supremacy is founded—efficiency, dependability and economy.

Farmers particularly need the room and riding comfort of the Overland.

Farmers' wives tell us of their appreciation of the style distinction of the Overland.

These Overland qualities are of even greater importance today when time and energy are demanded on the farm as never before.

So now while thousands of other farmers and their families are saving time, energy and money with this Overland Thrift Car—

We suggest that you let the Willys-Overland Dealer show you how this same Model 90 will earn its way for you.

In your interest, today is none too early to place your order.

Appearance, Performance, Comfort, Service and Price

Light Four Model 90

Willys-Overland Inc., Toledo, Ohio

Willys-Knight and Overland Motor Cars and Light Commercial Cars

Canadian Factory, West Toronto, Canada

Catalog on request, please address Dept. 1213

MAY 1918

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FARM AND FIRESIDE

The National Farm Magazine

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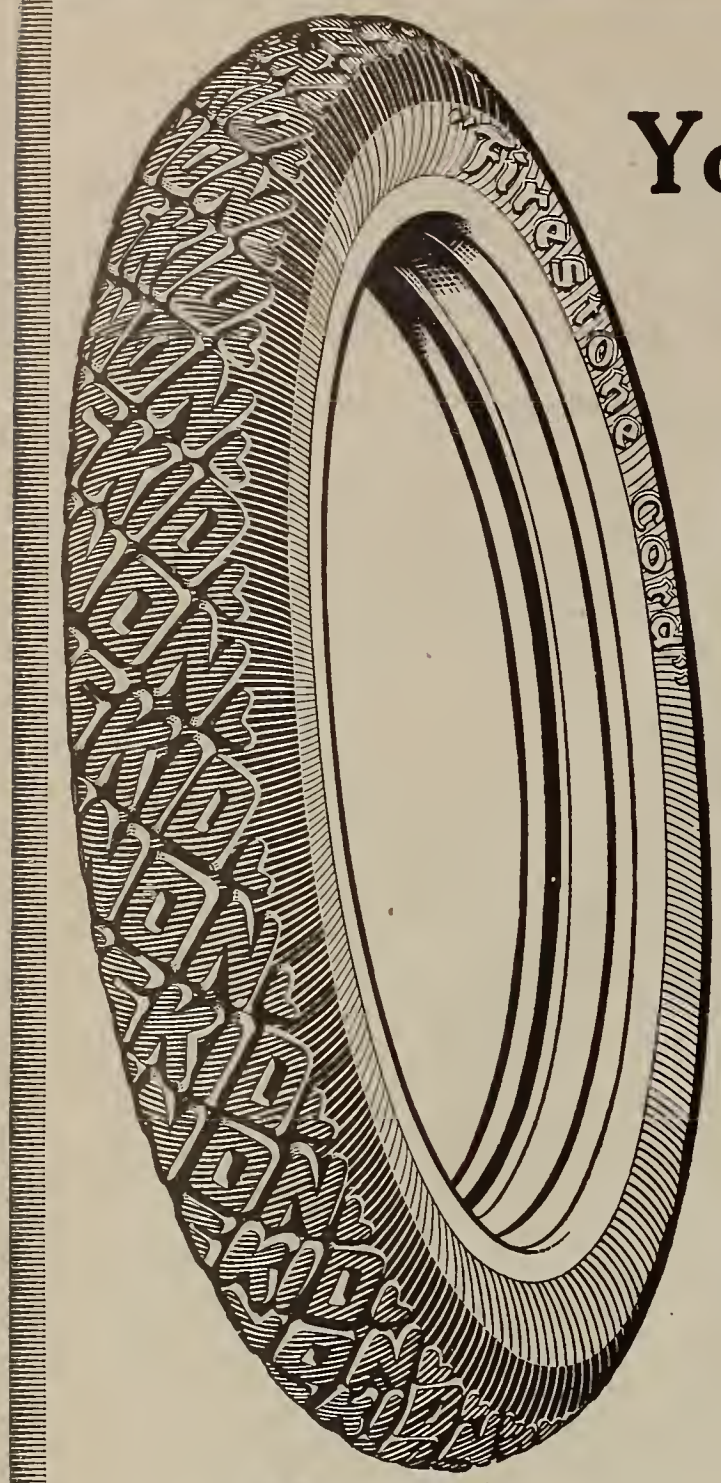
U. S. Department of Agriculture

Norman Rockwell

Swapping Germans for Canadians—By Private Rossiter



You who know machinery can appreciate this Tire

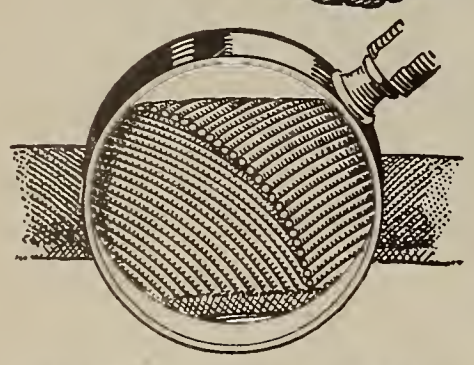
A tire is a machine. Beneath the outer surface of tread and side wall are the thousands of parts that compose this remarkable mechanism. And every moment that your car is in motion these parts are moving.

Just as in any machine, each part must be strong enough to do its work. It must operate with the least possible friction, in unison with its neighboring parts.

To you men of the farms who know machinery, Firestone Cord Tires present special mechanical advantages. Find why they give greater comfort and speed, why they save gasoline, why they consistently render Most Miles per Dollar.

The illustrations below show you why the internal action can be instantaneous and yet almost frictionless. They show why the very frame work can move and yet be the support for the rest of the tire. In these pictures you find the counterparts of frame, gears, bearings, levers. An intricate yet powerful, smooth-running mechanism.

The inner construction of Firestone Cord Tire is made clear by the cross section (reproduced below) which your dealer has and will be glad to show you.



Here are the cord layers—a frame work that moves. Each cord mounted in a continuous "ball bearing," so to speak, of fine rubber. Free movement without rub or rasp. Easy running, long wear.

This single cord in the frame work of the tire has been enlarged to show how it in turn is built up of many strong strands with great resisting power. The rubber which surrounds this cord penetrates through all the strands, reducing friction, prolonging life.

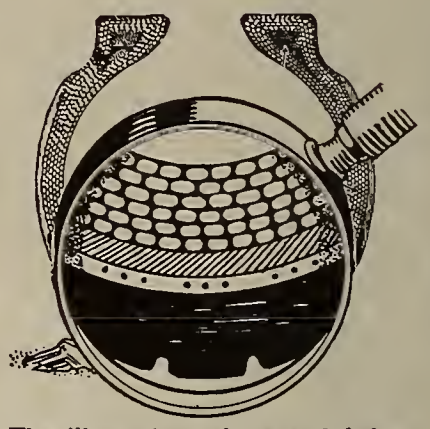
The tread has resistance to oppose road wear with resilience to absorb jolts.

The breaker strip; special rubber combined with a wide mesh fabric. Distributor of shocks and welding element between tread and cushion.

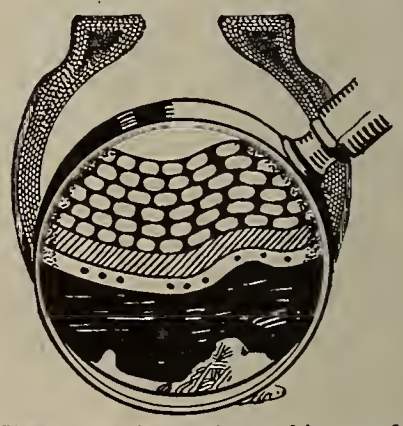
Cushion. A thick layer of very fine rubber. Absorbs a large percentage of road shock before it reaches the body of the tire.

Body or frame work. Powerful cords carried in a continuous bed or "ball bearing" of fine rubber. Free movement with least friction, heat and wear.

Reinforced bead. Braided piano wire built in as integral unit of tire. Reinforcement carried up into side wall.



The illustrations above and below demonstrate the machine-like action of the Firestone Cord Tire. The top cut shows the parts of tire in normal position. Below is shown how the parts move when a rock or other obstruction is hit.



Tread, breaker strip cushion, and the numerous cord walls each absorb its share of the burden so that the strain on any one part is so small as to be harmless.

FIRESTONE TIRE & RUBBER COMPANY, AKRON, O., BRANCHES AND DEALERS EVERYWHERE

The Most Interesting Story in the World

THE daily mail is an ever-changing and never-failing source of interest to me. By means of it I keep in touch with farm sentiment and farm progress from coast to coast. Every envelope is a closed door behind which any story or secret or mystery or romance may be found.

Slitting the envelope is just like pushing open a closed door. Sometimes I do it suddenly, with a bang, like a boy rushing in the kitchen door, yelling "Ma" at the top of his voice, forgetting all about wiping his feet before he crosses the threshold. Sometimes I do it slowly, wonderingly. What heart throbs may be felt the moment the door is ajar! What sweet-faced, gray-haired lady—the very picture of my own mother—may be sitting at the window, looking out on her world!

I think it was Robert Louis Stevenson—I've liked him ever since I was a boy and "Treasure Island" came into my life—who said that the most interesting story in the world is the story of the man next door.

What he meant was that you did not have to go to the royal courts of Europe, to the South Sea Islands, or anywhere at all to find romance and heart interest: it was right next door. I might paraphrase Stevenson and say that the most interesting story in the world is to be found in the next letter I open. Let's see if it comes true:

DEAR EDITOR: I am a farmer, twenty-six years old, and own 100 acres of land, half paid for. I have no bad habits. I sure do need a wife badly, but none of the girls around here appeal to me. Would you suggest my going to the town where I do my trading and trying to meet some of the girls there? Do you think a town or city girl would make as good a wife as a country girl?

And still some men say that opening and answering mail is a task. "The most interesting story in the world"—what could be more interesting than the success or failure of a young man before whom life is just opening up full of promise? Supposing my answer sends him off on the wrong path; there are a thousand possibilities. Do you wonder that I weigh each word as I put it down? I don't like one phrase this man uses; he speaks of seeking for a wife in the town "where I do my trading." Am I captious or obtuse when I read into these words the meaning that he proposes to seek a wife as he would seek a pair of boots or a new tire?

Where to Look for a Wife

What does it matter where he does his trading when it comes to finding the right girl? Good girls are not on the matrimonial market to be bartered and traded for. What does it matter if a man does own 100 acres, either paid for or not? A good girl owns something worth so much more there is no estimating its value. It would be better for this young man to look over the girls in his immediate vicinity, then get down on his knees before the best one, and humbly ask her to marry him.

Why go to the town where he "does his trading," or to any other town? A farm girl was good enough for me; farm girls have been good enough for several million farmers.

And he'd better be pretty considerable humble and forgetful of that hundred acres too, when he asks, or the farm girl of his set is likely to say "No" most decidedly. A good wife is greater than any riches. Even the homeliest girl confers the greatest favor imaginable on any man when she promises to be his companion for "better or for worse," until death does them part.

DEAR EDITOR: What can a farm girl do to help win the war? I seem so helpless and useless nowadays, while all the boys and men are fighting to keep the world safe for democracy. How can I do my bit?

You can do it in a score of little, unobtrusive ways, perhaps the very way you have been helping for months past. You may be so busy with your poultry flock, with the thousand and one duties of the average farm home, that you find no time to knit a sweater.

You may not be able to go into town and work with the Red Cross women on the surgical dressings. You may not have a brother or a sweetheart in camp, cantonment, or trenches, to whom you can write a letter of cheer. You may not have a spare cent to put into Liberty Bonds or Thrift Stamps. But you can do your bit just the same.

Not all the women who are knitting are patriotic because of that fact. Did you read the story called "The Clackers" in one of the weekly magazines recently? It tells of the "knitting knockers," how they believe and carry the gossip about the "hardships" our boys are enduring; how they knit and knock and moan to one another, "Oh, isn't it awful to think of them over there, suffering and being killed and all for nothing!—" and so on and on.

One bright-faced, smiling, happy, cheerful girl on the farm, going about her work with a song on her lips, keeping everyone in the household keyed up to the highest point of efficiency and happiness, is worth a dozen knocking knitters.

What a Cheerful Girl Can Do

When you speak of the war, to your father or to the hired man, speak of it as something which is making the world better, which is uplifting it, which it is a glorious pleasure to take a part in; speak of "the boys" as having a chance to make something of themselves, to have the dross refined out of their system, of how they will come back men, such men as we have had need of here for many a year.

We have enough "oh, the poor boys!" clacking around nowadays. Do your bit by hoping and praying and talking of high ideals and great accomplishments and what a privilege it is to go "over the top," however humbly.

DEAR EDITOR: I'm just about discouraged to the extent of fearing I'll never own a place of my own. How can I go about to buck up and amount to something? I want to stay on the farm.

I assume that you keep your copies of FARM AND FIRESIDE, for a few months at least. Turn back to the February issue and read the article Peter Hopley wrote telling how he made a million dollars farming. Then drive into town and talk to your banker. If you never had an account before, open one—even if you have only $5 to begin with. Tell him you're going to try to make good. He'll keep his eyes on you; he'll see you every time you come in to deposit even a dollar.

Cut out the extravagances and the vices, but don't become niggardly. The happy, contented man succeeds long before the overworked, tired-out, disgruntled man. If moving picture shows make you feel more like working, take them in. Figure expenses in terms of production. Is a show worth a bushel of corn or half a bushel of wheat to you? That will soon open your eyes as to whether you're spending money foolishly and uselessly or not.

Save as much as possible and make your money work fully as hard as you do. By that I mean, make every dollar of your savings draw interest, four per cent at least. But don't let anybody inveigle you into any scheme that promises returns above six or seven per cent, without speaking to your banker about it first. "Get rich quick" makes good fiction material, but mighty poor actual experience.

Borrow money every now and then, to buy something that will earn you money, so as to prove to your banker that you're a good loaning risk, and let him know what you want the money for. Do this for one year, then write me again. If you haven't increased your capital 25 per cent and your hope 100 per cent in that time, I'll be greatly surprised and disappointed.

The Editor

Two Ways to Get Wear Out of Shoes

The old way to make shoes wear a long time in farm use was to pile on an extra pair of heavy taps. Sometimes even two pairs were added—and on practically new shoes.

This method got results. But it made the shoes clumsy, uncomfortable and *stiff as boards.*

The new way to get extra wear from shoes is merely this—make sure that the new shoes you buy have Neōlin Soles, and, when you repair old shoes, put on Neōlin Soles or Taps.

Neōlin Soles are so *tough* and *durable* that you get the *extra wear without the extra weight and without the discomfort of stiff soles.*

Yet, with all their durability, Neōlin Soles are much easier on the feet than other soles —because they are *flexible.*

Moreover they are water*proof*, resist slipping on ice or wet spots and *do not wear slick* on grass or stubble.

Get Neōlin Soles on the shoes you buy for *every member of the family.* They cost no more than other soles to start with and bring you a *big annual saving on shoe bills.*

But when you get them make sure that the Neōlin trade mark is underneath. It marks the sole created by Science to have *all the qualities a sole should have*—and none of the drawbacks which other soles have. *Mark* that mark; stamp it on your memory: **Neōlin—**

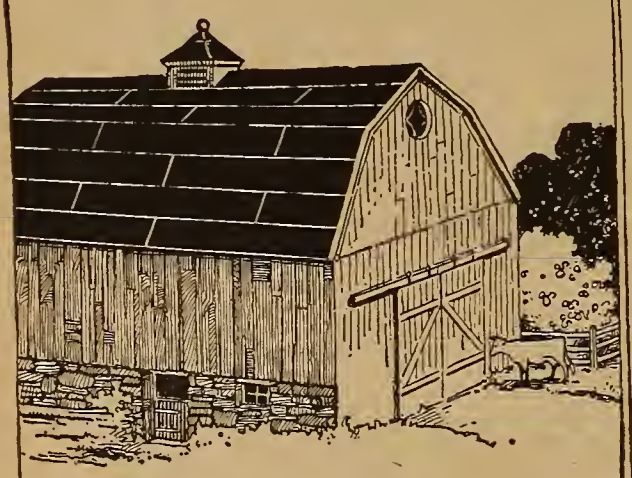
the trade symbol for a never changing quality product of

The Goodyear Tire & Rubber Co., Akron, Ohio

Neōlin Soles

Trade Mark Reg. U. S. Pat. Off.

Barrett Everlastic Roofings



"The Big Four"

WHEN you think about roofings the name *Barrett* comes first to your mind. This is because Barrett roofings are known the world over *for quality, durability, and economy.*

Our Everlastic System of Roofings, or "The Big Four," as we call them, is described below. It offers a kind of roofing for every type of steep-roofed building in America. This covers everything from residences, farm-buildings, and factories, down to the smallest of temporary structures.

The Everlastic line includes shingles and roll roofings, plain or in colors. All you need do is to go to any first-class dealer, ask him to show you the Everlastic line, and you will find exactly what you want.

Everlastic "Rubber" Roofing

This is our most popular line and thousands upon thousands of buildings all over the country are protected from wind and weather by Everlastic "Rubber" Roofing. It is tough, pliable, elastic, durable, and very low in price. It is also easy to lay, no skilled labor being required. Nails and cement are included in each roll.

Everlastic Slate-Surfaced Roofing

This is the most beautiful and durable roll roofing made. It is manufactured of the same materials as Everlastic "Rubber" Roofing but has a beautiful surface of real crushed slate, either red or green. The slate not only makes a very handsome roof but one that is fire-resisting and very durable.

Everlastic Multi-Shingles

This is the newest thing in roofing, being *four shingles in one.* When laid they look exactly like individual shingles and make a roof worthy of your very best buildings. Being four shingles in one, they save a great deal of time in laying and require fewer nails. Red or green slate surface.

Everlastic Tylike Shingles

These are made of the same material as the Slate-Surfaced Roofing (red or green) mentioned above but come in individual shingles. The finished roof is far more beautiful than one of ordinary shingles, and in addition, Tylike Shingles are fire-proof and cost less per year of service.

BOOKLET FREE

Write for booklet describing these roofings and also telling about other Barrett Specialties that you constantly need. Address nearest office.

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Detroit, Kansas City, Minneapolis, Nashville
Birmingham, Salt Lake City, Seattle, Peoria

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When our train crossed the Holland frontier, the Germans again examined our things before they turned us over to the Dutch

Swapping Germans for Canadians

By Private Rossiter

"AREN'T you going to be examined for the English exchange?" I was lying on my allotted space on the floor, reading Mark Twain's "Innocence Abroad," one afternoon in Hamelin prison camp.

"What exchange?" I cried in amazement.

"Why, haven't you heard? There is to be an examination of all disabled English prisoners. Better hurry. All the other fellows are waiting at the gates."

I didn't wait to hear any more, but rushed toward the gate. All the others had filed out, and the sentry was about to close the gate as I rushed through it.

I crossed the road and entered the enclosure of the hospital. Here the English prisoners were assembled. Most of them knew that they couldn't pass, but they were going to make an attempt.

"*Achtung!*" ordered the sentry, and we all sprang to attention as the doctor stepped into the room. He examined us one by one. When my turn came he asked me many questions, after which he told me to remain after the others had gone back to the prison camp. Then he gave me a thorough examination, telling me to report the next morning. That night all the fellows congratulated me. They were certain I would be exchanged. I refused to believe them, as I had already had sufficient disappointments.

The next morning a crowd escorted me to the gate at the time I was to report. They wanted to accompany me to the hospital, but the sentry wouldn't let them. The doctor examined me thoroughly again. Then the *Unterofficier* took full particulars of my past history and wound.

"You will leave for England in a few days," the doctor informed me. After his departure I asked many questions of his Belgian orderly.

"You will get through without trouble," he said.

"Well, if that's the case, why have I been sent to five prison camps since I was captured?" I inquired. "Why didn't they exchange me from the hospital in Hannover?"

"I don't know, but you will get through."

Still I didn't believe him or my fellow prisoners, who were confident of my exchange. Days passed, and no word. I didn't give up hope, as I had none to give up.

One morning I received orders to report at a certain barracks along with a number of others. The fellows all said it was the final examination. Instead of it being the final examination for exchange, it was one to see if I was able to work.

"I cannot work. I have been recommended for English exchange. Besides, I have only one hand," I told the German officer. But that made no difference. I was marked fit and received orders to leave in two days' time.

That afternoon the *Chef de Companie* received orders that I was to report the next morning at the administration building with all my clothes, as I was to be exchanged. While all the English prisoners were overjoyed and excited at the news, I refused to believe for one moment that I was to leave.

When I reported at the *Commandateur* the next morning my clothes were taken from me. I was issued a nondescript uniform while my own was being examined to see if I had anything sewed in the linings. My appearance created a lot of laughter at the barracks. Even the Russians laughed at me.

My clothes made me look funnier than a circus clown. I was wearing a pair of brown canvas boots with heavy wooden soles, a pair of old French cavalry breeches that reached a few inches below my knees, gray socks, red underwear, and a mud-brown tunic. My hat was blue and yellow. As I was held up to such derision, I was not sorry when night came.

Farewell to the Prison Camp

THE boys all gathered around my "bed" that night. Some were giving me instructions, others were packing my lunch, all were asking questions. They bid me good-by when they left, as I would be gone when they arose the next morning. It was hard for me to leave those fellows. Some of my best friends were among them, and they had all been very kind to me. I knew that I would never see some of them again.

Although the night was extremely hot, the Germans let the lights burn all night long. This increased the heat, which made it more difficult to sleep. Even the fleas knew that I was leaving, and were having a final attack.

The *Chef de Companie* came for me at four o'clock in the morning. I changed into my own clothes at the *Commandateur*. I had overlooked turning in my lunch to be censored, so the *Feldwebel* had to see what I was carrying. All my eatables were in cans, but he was so afraid that I might be carrying out something that he opened each can.

I was turned over to a sentry, and under his charge arrived at the depot in Hamelin, three miles from the camp. As usual, the train was several hours late, which did not improve my lunch. After the train started I had my breakfast, sharing my food with the sentry, who had only a small ration of bread to last him all day. He seemed grateful, but it was only on the surface. Later on he had many opportunities of repaying me, and he did in the usual German way.

The fleas had been so bad in the Hamelin prison camp that eight large abscesses had formed on my legs. The heat of the day and the continual rubbing of my long shoes irritated the sores, so they became very painful. Standing in open cans had not improved the food, with the result that I became very ill shortly after eating lunch. I was suffering untold agonies from thirst. This made no difference to the sentry. He refused to listen to my cries for water.

Finally he did tell me that he would give me a drink when we reached Soltau. Arriving there, I again asked for water, which made him extremely angry. He ordered me to march. With great difficulty, and suffering great pain, I marched to the *Commandateur*, which is a mile from the station. Then I was ordered to march back to Soltau. I could go no further without water, so I lay on the ground and refused to budge until I had a drink. Then, and only then, did he make inquiries about water, sending me after it.

Then began the worst march of all—back to Soltau. I was carrying a small parcel weighing about ten pounds, but before the return journey came to an end it felt as if it was a ton. Every hundred yards or so I had to stop for a rest. Each stop made the sentry angrier. About halfway back we met an officer. I was in front of the sentry. I was too weak to salute, only coming to attention. The sentry did his three "goose steps," after which he kicked me severely for not saluting. From then on every time I attempted to rest he forced me on by vigorous kicks. This was the same fellow I had given food earlier in the day.

At Soltau I met an old friend but was too sick to talk to him. I went to bed with three friends from Hannover, who were going up for exchange. The next afternoon, we were loaded into a wagon pulled by Belgians, who were hitched to it like horses.

What a difference between England and Germany! England sends her German prisoners home in a Red Cross train, with beds to sleep on. Germany provided us with a fourth-class car. She gave us piles of rushes to scatter on the floor for beds. Food was given us at different intervals en route. I was the only one who could sit up, the others being bad cases.

We arrived at Aachen late the next afternoon. Here there was a noted change in the treatment we received. We were even met with automobiles. The examination is made in a building known as the "Glass House" because it is constructed of that material. The treatment was of [CONTINUED ON PAGE 26]

More Corn from Fewer Acres

By A. T. Morison

THE production of the 1918 corn crop is the biggest problem that has ever confronted the American farmer. He has been asked to raise the biggest crop in the history of the world, and seemingly he is in the worst possible shape to do it. Never before has the seed-corn shortage been quite as acute as it is this spring, and the scarcity is in no way the fault of the farmer.

Early, hard frosts killed the growth of the corn all through the northern part of the country before it was sufficiently matured for seed. Farther south, in the latitude of central Indiana, the killing frost did not strike until two weeks later, and the men who regularly pick their seed corn early had it hung up to dry in plenty of time. Ninety-nine years out of a hundred they would have been safe, but this year they lost. A week of zero weather came before the corn was thoroughly dried, and the germ of it was killed.

The only farmers in the central part of the corn belt who have seed at all are those who dried it artificially. The southern part of the country is well supplied with seed, and even has a surplus, but it cannot be used in the north because it will not mature there. The farmers of the north will have to depend on old corn, the remainder of the 1916 crop, for their seed supply. Whether or not this will be sufficient to plant the expected acreage depends on the economy with which it is used.

This is no year to look for good seed ears. Every nubbin, if it possesses vitality, must be pronounced fit for use. A very careful seed-corn survey just completed in Indiana indicates that that state has sufficient for its own needs, and the same condition perhaps exists in the other corn-belt States. If this case is true, there will be sufficient seed.

No one should buy more than is absolutely needed for his acreage, for if he purchases in excess the supply will be exhausted, and someone will have to do without. A fair amount is a bushel for six acres. That will allow for some ears being thrown out in the test. It will not permit of any replanting, but every farmer should make it his business to see that he has no need to replant.

Seed Vitality Determines Stand

EVERY ear of corn must be tested. This has been preached for years, and practiced by a number of farmers, but it must become universal this year if a full stand of corn is to be obtained. No man can tell if every ear will grow just by examining it with his eye. The best farmers are very willing to admit that some ears will fool them. I have tested seed corn for more than three hundred farmers this spring, and they have all been surprised at the results. Ears that they have been sure would grow have failed to sprout in the germination box.

The average test of the new corn has been 30 per cent, running all the way from nothing to 100. The old corn has averaged about 70 per cent, and that result has been a surprise to many. Last spring nearly every ear of corn would grow, and many farmers expect that it will do so this season, as it comes from the same cribs. This, however, is not the case. The vitality of corn lessens with age, and ears that had a tendency to be weak last spring are dead now. A few samples of 1915 corn that I have tested have germinated only about 50 per cent, and the sprouts were weak and very slow in starting.

It will not be safe to plant old corn that grew last year without testing. About 30 per cent of it can be depended upon not to produce. Any method of testing desired can be used, and six kernels, two from the butt, two from the middle, and two from the tip, from all sides of the ear, should be tried. If all six do not show strong sprouts, the ear should be discarded. If the farmer gets his seed and culls out the poor ears by individual test, he is fairly safe from danger of need for replanting.

Corn planted in a good seed bed sprouts quickly and soon develops a strong root system

Just the matter of a supply of viable seed, however, is no assurance of either a good stand or a big crop. Old corn germinates slower than that which is new, and there is danger of its dying after being put in the ground. To get away from this the corn should not be planted until the soil is fully warmed and danger of cold spells is past.

Every spring many persons get impatient when the warm days come, and put their corn in. Too often a week of cold, wet weather follows, and the seed rots in the ground. This year, with most of the seed old and slow of germination, there is a double risk from this cause, and, worse yet, there will be no seed supply from which to replant.

Farmers must stake all on their first planting, and if it fails their crop is done for. The seasons of course vary, but a safe general rule for the latitude of central Indiana is to wait until the ground is thoroughly warmed in May before starting to plant. This can be varied slightly to suit weather conditions, north or south.

The time before planting can be used to excellent advantage in preparing a fine seed bed. Too often corn is put in before the ground is well worked, and the result is always a thin, uneven stand, and a root system so shallow that the corn blows down easily or fires with the first dry spell. One of the best cornfields that I saw last summer was put in ten days later than the general crop of the section. The grower took plenty of time to disk and harrow his soil, and got it so fine that his horses' feet sank to the fetlocks as they walked over the field.

When the corn was planted it sprouted quickly, and in the fine, loose soil it developed a root system so strong that it withstood both a heavy windstorm and a severe drought, and ripened in better shape than 90 per cent of the corn in the neighborhood. A well-prepared seed bed always pays, and this year it can be prepared to better advantage than ever, for the delay in planting to insure a warm sprouting season will allow time for thorough soil-working.

Another factor that will tend greatly to increase the 1918 corn crop is the use of plenty of fertilizer of the right kind. Acid phosphate, or, if it cannot be obtained, some fertilizer rich in phosphoric acid, is the best possible source of artificial plant food for the corn crop. In buying fertilizer it should be kept in mind that the phosphoric acid is the part that makes the grain. Ammonia and potash stimulate growth and build stalks, and the average corn-belt farm which is manured and clovered contains plenty of these elements in the natural soil.

Nearly all of them, however, lack phosphoric acid. Thus the use of plenty of this fertilizer is bound to pay. One hundred and fifty pounds of acid phosphate, drilled in the row, will return every dollar invested with a high rate of interest. It has never been proved that heavier applications, broadcasted, pay any better than the largest amount used in the row.

I never saw the value of plenty of acid phosphate better illustrated than in Fayette County, Indiana, last season. A number of the farmers entered the five-acre corn contest conducted by the Indiana Corn Growers' Association.

What Liberal Fertilizing Does

THE best result was obtained by W. E. Brown, a Connersville farmer, who also carried off the state championship. He plowed down eight tons of manure per acre, and applied 175 pounds of 16 per cent acid phosphate, drilled in the row. His yield was 102¼ bushels an acre of dry corn. At shucking time it was firm and bright, while adjoining farms had fully one half their crops too soft for cribbing.

Of the twelve men who entered the contest, five used commercial fertilizer in amounts of 125 pounds or more an acre, while the other seven used an average of 75 pounds. The yields of the first five averaged 93½ bushels per acre, while the average of the other seven was 64 bushels, with 73 as the highest.

Moreover, the men who used the heavier applications of fertilizer had much the hardest and driest corn at shucking time. The abundance of phosphoric acid matured their crops, and instead of having to throw out half of every load as too soft for keeping, they were able to crib practically all their crop. This was the strongest proof of the value of heavy applications of phosphoric acid for corn that I have ever seen.

The fields were cultivated by practical farmers, and the crops judged by impartial men. Of course, part of this heavy yield was due to exceptionally good care of seed and cultivation methods, but the major part of the increase could be attributed to nothing else than the correct use of commercial fertilizer.

After the corn crop is in this season, the next factors of contention will be weeds and dry weather. Labor will be scarce, and for that reason cultivation will be difficult. One solution for this scarcity is the use of more two-row corn plows. On level prairie soils, just as good cultivation can be accomplished with them as with the one row, and twice as great an acreage can be covered daily. Further, the extra cultivations given by many farmers can be eliminated.

I know men who feel that their cornfields are neglected if they are not plowed at least five times. As a matter of fact, three cultivations given with sufficient care to get rid of the [CONTINUED ON PAGE 24]

Ground limestone, acid phosphate and barnyard manure applied on the field on the left produced 63 bushels of corn an acre. Without them the other field produced 26 bushels an acre

Our Farm's "Come-Back"

By Hilda Richmond

"NOW let me see!" said the real estate agent briskly. "Eighty acres of land, two miles from town, good pike, fair buildings, close to school and church, rural free delivery, telephone line past the house, good neighborhood, running water in pasture—" He broke off abruptly in his list to say: "What are the reasons for selling? Most customers ask that the first thing."

"We want to go West," said my husband and I in unison, and with more energy than either of us had shown for many a day.

You see it was this way: My husband had inherited the farm with a mortgage on it from his father twelve years ago, and we had never been able to make more than a miserable living and pay the taxes. The buildings needed repairs badly and the fences were poor, so we both thought there might be more of a chance out West.

We were all sickly. It seemed as though the children and I never would see a well day, and we thought maybe a change of climate would help us all. Anyhow, we had never had any luck on the old place.

"I don't suppose it will sell," my husband told the agent despondently. "Our folks never had much luck and it isn't likely anyone will want the old farm."

"Nonsense!" said the agent. "All you have to do is to clean up a little, nail on the boards that are dropping off, trim up the neglected trees, plant a few flowers and some shrubs, and somebody will want it right off the bat. Of course, fall is a poor time to sell, but wait till next spring. If you spruce up a little I'm sure I can get you $100 an acre for the farm."

"One hundred dollars an acre!" exclaimed Will. "I'd take eighty tomorrow if anyone was foolish enough to offer it."

"But you're going to clean up a little," said the young man, limping to the door. "Begin to-day and make the old place shine. The extra $20 or $30 dollars per acre will come in handy when you go to move. Railroad fares and moving bills are high nowadays."

In spite of his loss of a limb the young fellow moved briskly to the door, followed by our whole family. It was a beautiful day in early October, but inside our stuffy, dark house with its fire burning in the air-tight stove the atmosphere was unbearable. It was cold, and I huddled in an old shawl as I accompanied the agent to the porch, and the children clung to my skirts and shivered.

"Fine view!" said the agent, waving a hand toward our neglected pasture with its sorry-looking horses, cows, and the few old sheep grazing among the mullein stalks and the thistles. "Get rid of your stock and get some fine fat animals down on the pasture. Get a few beautiful chickens in the yard and advertise the fertility of the farm."

"No use to keep chickens," I told him pessimistically. "The rats take all the young ones."

"We can't afford good stock," said Will. "It's beyond our reach."

"Now, look here!" said the agent sharply. "If you and your wife want to sell this farm as bad as you say you do, you must get to work. Make a clean sweep of that worthless stock and get some good stuff. I know a number of town people who would like to winter cows and family horses on a good place where they will be well cared for. I can make the arrangements if you are willing to carry out the work. You have some rough feed and it will be easy to winter a lot of stuff. Pasture will last at least a month and you can make some money."

"Well, we can try it," answered Will; "though I don't believe we'll succeed. When a man gets down it's hard work to get on his feet again. With bad luck and sickness and misfortune I've had more than my share. Last year I lost a horse and a cow, and this year three of my best sheep got mired down in the mud at the watering hole and died before I found them."

"And cholera took off more than half my chickens," I added. "There's no place on earth for poor folks."

"I didn't have a cent to my name when I lost my leg two years ago, and now I have a nice little start," said the young agent. "The only poor people in the world whose case is hopeless are the class that want to stay poor. The others are bound to rise."

"Much he knows about it," said my husband looking after the agent. "If you have bad luck you can't rise, and that's all there is to it. Well, it's worth trying to put the place in order if we can only sell it. I'm going to begin burning off the weeds this very day."

"But it won't do any good," I said. "Talk is cheap. Agents are used to telling people they can sell their farms."

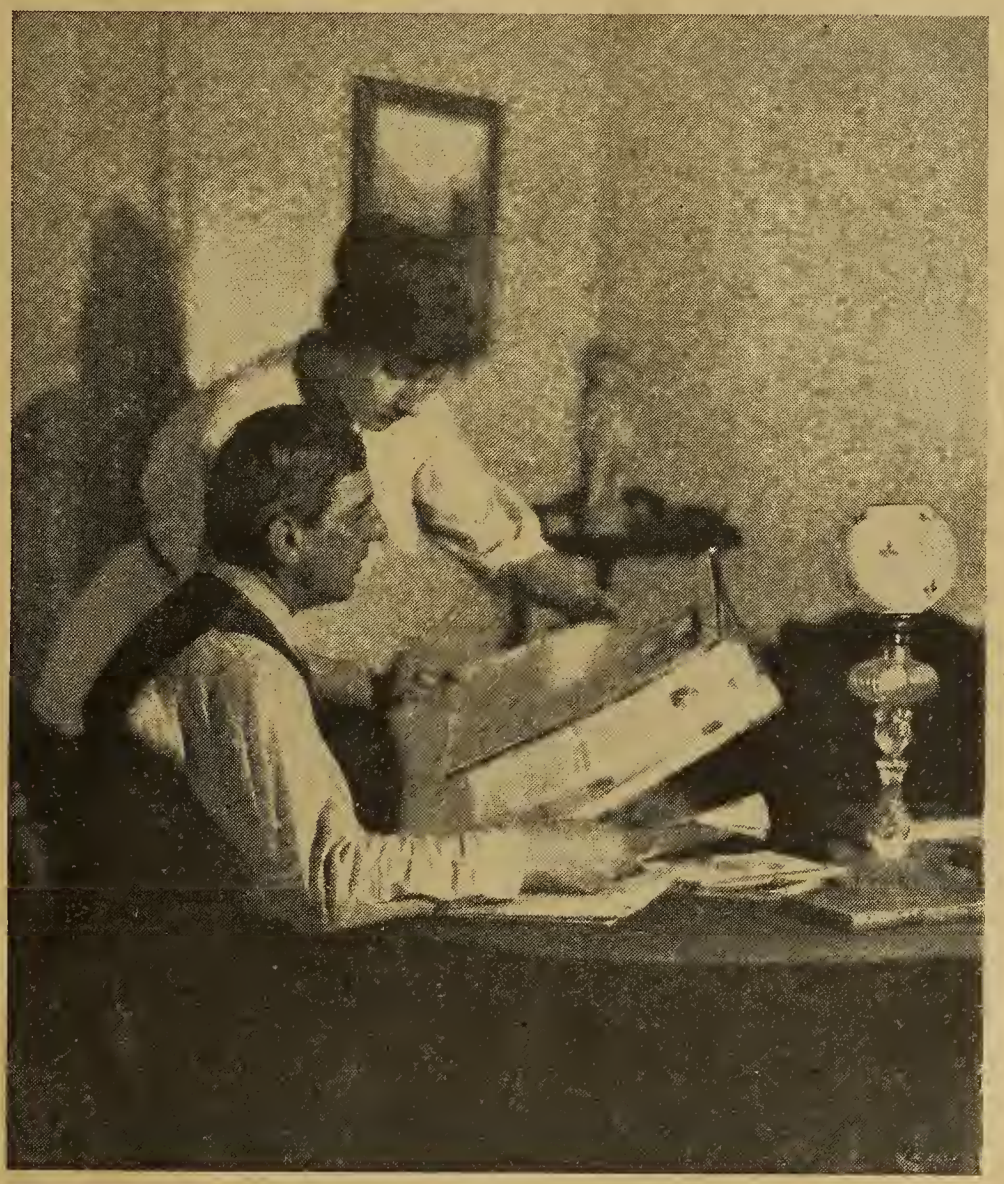
"Let's try anyhow," said my little daughter Bessie. "I'd like to go West."

"So would I," said son Billy heartily. "I'll help you, Papa."

Children are always interested in destroying things, so when the lazy October wind fanned the weeds and trash into a glorious blaze they shouted like Indians. It was a Saturday afternoon and they were free to turn loose, so they ran with flaming torches and wisps of dry straw until the entire front of the place was blackened and bare where once rank weeds had overgrown piles of trash.

When I went out and looked at it I told myself that no one would want to buy the farm now. The blackened fields and lawn made it look worse than I had ever seen it. Considering its former condition, that was saying a good deal.

"We killed nineteen rats, Mama!" screamed Billy. "Fast as they ran out of brush piles and weeds Papa killed them. They won't take any more chickens."



"Will, I found an attractive advertisement of a farm this morning," I said

"Kill one rat and fifty come to the funeral," I said sourly. "Come on in to supper!"

I had got so used to seeing the dark side that I couldn't see anything else.

"Gee whiz, the air in here is fearful!" remarked Will, throwing open doors and windows. "Dr. Butler says we ought to have fresh air in the house all the time."

"Yes, and give the children all snuffling colds," I told him ungraciously.

That night it rained, and in less than a week a beautiful green carpet covered the place where the fire had cleaned and purified the soil. Even I, with my chronic grouch, was touched by the beauty of the scene, and willingly helped my husband as he planted some shrubbery in the bare yard. The neighbors gave us lilac, syringia, snowball, and other common shrubbery, and Will grouped the plants about the lawn in a really artistic manner. The big old trees were unkempt and thick, leaving little space for shrubs or vines, but he announced that he meant to give the trees a good trimming at once.

"I'm going to sell every hoof on the place," he announced. "The horses we board will do to drive this winter, and next spring we sha'n't need any. This place is going to sell. I can see $10 worth of improvement right now, and I've only begun. Mattie, you can get some good chickens as soon as you sell off these scrubs. It will only be a short time until we'll have this old farm of ours looking like a garden."

When the trees in the yard and orchard were trimmed, and the wilderness of brush turned into rough firewood, the farm seemed to increase $10 more in value. I began to grow enthusiastic, and spent every spare minute out of doors helping along. The agent had had two inquiries about the old farm, so every day we put on top speed to clean the premises, nail on boards, and make everything attractive before winter came. The cellar drain, which had not worked for years, was put in order, and the sticky mud on the cellar floor dried as if by magic.

The garbage that had once been cast to the winds with reckless hands was now gathered, and the tin cans dumped into an abandoned well that had been an eyesore for years. The children begged to stay at home from school to help, so that they could sooner start for the West; but we were firm, and only after school and on Saturdays did they get to help.

"Fifty cents a dozen for eggs!" I told Will proudly as we drove home from town in the old surrey behind one of the "boarder" horses the middle of November. "Eight dozens from our new hens. You know I always felt sure the big stories we read in the farm paper were made up, but I know better now. I might have been keeping pure-bred chickens all this time if I had only known what they would do."

"I'm going to buy a cow with our railroad money," he replied. "I know where there is a good one, and the agent will take me there in his machine. I can make it back this winter, and more besides. He's anxious to make a good sale and I want to help him. He sold three farms last week, and there's no reason why he can't sell this one."

"I wish we could get a few sheep," I said. "I was reading yesterday where a little boy had made $50 in one year off two registered ewes. I could look after the sheep as well as not. Of course I don't get much housework done and scarcely any baking since I've been helping out of doors, but I can bake when cold weather comes."

"As far as I'm concerned I like your apple sauce and baked apples better than all the pies in the world," said Will. "Somehow, pie crust don't seem to agree with me. I've never felt better in my life than I have since we've begun having corn bread and apples and such stuff, instead of pastries."

"It's a good thing," laughed I, "for you couldn't have pies and cakes with me out tending the chickens and helping you. The boarder cows are nearly dry, but they give enough milk for all our needs; and it's good rich milk too. If we were going to stay here I'd want to raise some fine calves, for there's money in the milk business."

"I should say so!" chimed in Will enthusiastically. "When we get our cow we'll sell the cream and use the skim milk for little pigs. I'm going to get some shotes the minute I get paid for my boarders next month."

Our only regret was that we hadn't begun earlier, for we dreaded the cold weather and would have liked to move to a milder region. It was something of a temptation, therefore, when the agent drove up in his runabout and announced: "Buyer for the farm! Man offered me $85 an acre spot cash this morning. He'll take possession at once."

"I thought you said you could get us $100 an acre!" Will and I said in unison.

"So I could if you had finished cleaning up," said the agent. "My advice is to hold on till spring and get the bigger price."

After much discussion we decided to hold on until spring. "We have enough firewood now and our stuff is in the cellar," said Will, "so maybe we'd better stay. We have a dozen boarders in the barn at good prices, so it looks to me like a losing proposition to try to settle on a ranch out West in the fall."

Next day the man who offered $85 an acre for the farm came, bringing his wife to see the place. I rejoiced to remember that the blinds were tightly drawn, so that the dust and confusion of the unused rooms did not show. For years it had been the custom in our family to withdraw early in the fall into the two living-rooms down-stairs that could be heated roaring hot, and it always gave the house a huddled, forlorn appearance. I hurried the lady through the house, and then took her to see the fine poultry out on the green sod. It was a wonderful, bright, windy day, but the wind was warm and tender, so the fine chickens showed off beautifully in their snowy whiteness against the green background. Across the creek a dozen fine fat cows, pampered [CONTINUED ON PAGE 17]

What's a Dairyman's Future?

By Carlton Fisher

Even in an apparently uniform herd, highest yields are secured by feeding according to production

GEORGE SMITH is a dairy farmer. His neighbor, Bill Brown, is a cattle feeder. One cold night at two o'clock in the morning George went to the telephone and rang for Brown.

"Hello, Bill, this is George Smith!"

"Yes; what's up?" asked Brown, rubbing his eyes.

"Want to buy a good suit of clothes?" questioned Smith.

"No."

"Could I sell you my bed? It's good as new."

"Say, George, what in the world is the matter with you, calling me at this time of night to ask fool questions?" growled the cattle feeder.

"Why nothing, Bill," said Smith; "only since I've been dairying I never have time to go any place and don't get time to sleep, and I thought I might as well sell my good clothes and my bed."

While the story is perhaps one that never actually happened, it does point out a great deal of truth.

These are times that test the faith of the dairyman in his business—and in himself. The present war is not merely a supreme test of military strength: it is also an economic war, which means that every branch of our industry and every woman and child, as well as the men, is subject to the brunt of it. This fact explains in part why bitter complaints against present conditions have been heard from all quarters, and why some farmers have already changed their methods of earning a living.

In the area around Chicago, where complaints of the prices received by producers have been especially bitter, a considerable number of renters have declined to sign the customary spring leases, and instead have preferred to hire out as farm laborers.

Complaints outnumber expressions of confidence three to one. And yet I am confident there are better times ahead for dairymen who keep their heads level and conduct their business on a wartime basis.

It took England about two years to learn that in wartime business cannot be conducted as usual. France, who has fought Germany before—and not so long ago—understands Prussianism better perhaps than any of the Allies, and is putting about half her total energy into the war. France understands very definitely that military necessity comes first.

So, here in the United States, I am convinced, after talking with men who have taken a bird's-eye view of the whole situation, that the dairyman who goes ahead with the realization that his business is an essential war industry and works out his problems accordingly is going to make his efforts count, both for himself and for Uncle Sam. The first thing to realize is the limited capacity of American railroads. Because they have been just fairly adequate in peace times must not lead us to believe that they are adequate now. Certain commodities must be given preference. Munitions? Yes. Coal? Yes. Steel? Yes. Milk and its products? Yes. Other essential human foods? Yes. Feeds? Yes, when necessary and when cars can be spared.

Solid trainloads of dairy feeds have lately been dispatched from mills in the Central West to Eastern points where the feed situation was acute. But even the best intentions of the government officials cannot deliver cars for hauling feed when there are none to be had at certain points, nor when they are needed for hauling pontoons, cannon, food, clothing, surgical equipment, and other supplies vitally necessary for the American Army.

To the extent that every dairyman raises his own feed and adjusts the size of his herd more nearly to the feed in sight, by just that amount is he getting his operations on a war basis.

Farmers who had potatoes and corn to sell during this last winter, and still have some of them on hand, need no further lesson in wartime transportation. Railroads cannot be built when a nation has a colossal conflict on its hands, and it is futile for any class of peace industry to hope to get its usual share of freight service. Some dairymen have looked forward hopefully to the time when lower costs for mill feed would prevail in their localities. Bran, for instance, must not be sold for more than 38 per cent of what the wheat from which the bran was made costs the miller. Assuming that wheat costs the mill $2.13 a bushel, bran would cost—wholesale at the mill—a little less than $27 a ton.

Definite values for shorts, mixed feeds, flour middlings, and red dog in car lots have likewise been declared. A maximum of 50 cents a ton is permitted on feeds sold and shipped in less than car lots. The price at which the milling by-products mentioned may be sold varies from $2 to $5 a ton higher than bran. The aim of the regulations was to secure lower feed prices, and to remove the disturbance in flour values caused by increased returns received by the miller for his feed.

But at the new prices the demand for mill feeds, judging from present prospects, will exceed the supply, and the Government has frankly stated that there will probably not be enough mill feed to go around during the present season. Substitute feeds are suggested, and there is no other course if the amount of feed produced at home is insufficient.

Prices for these substitutes, such as barley feeds, oat feeds, hominy feeds, cottonseed meal, dried grains, and alfalfa molasses feeds have not been limited, although the President's proclamation authorized by the food control act has stopped all large-scale speculation in their general wholesale handling.

Thus, while the interests of dairymen have to a large extent been safeguarded, they are still obliged to do considerable headwork in managing their business.

Billy Sunday, the evangelist, believes that brains will win the war. He declares that the superior brain power of the Allies will triumph over the Prussian mailed fist. Brains are certainly going to count more in farming, and especially in the dairy business, this year than in peace times. We can conserve the work of milkers by beefing the boarder dairy cow. High costs of both feed and labor make such cows more unprofitable than ever. Every dairyman must appoint himself a feed administrator for his own farm and, by studying the kinds, amount and price of feed, ration it out to his highest producing cows liberally, so they will return profits which have been lost by less skillful management.

Every dairyman must also consider himself a labor administrator to devise short cuts and to see in what way one dollar's worth of equipment will save two dollars' worth of labor. The value of a litter carrier, a new cream separator, a milking machine, or even a better kind of manure fork can be readily figured in terms of hours saved. Time this year is a big factor in success.

Just what is ahead in retail prices for dairy products is still somewhat a matter of conjecture. Officials in Washington who are in a position to influence public opinion are emphatic in their statements that the campaign against waste must not be considered in any way a discouragement of the plentiful use of milk. The Food Administration has [CONTINUD ON PAGE 24]

Butchering the boarder cows means just that much more feed for the high-producing cows

Secretary Houston's Dairy Recommendations for 1918

Better care and utilization of pastures.

Raising on the farm adequate supplies of roughage to take the place of grains.

Keeping for dairy purposes all the high-producing animals, which necessitates a record of production of individual cows.

Full utilization in the community of good bulls, prompt control of disease.

Dairymen are entitled to enough for their milk to yield a fair return on labor and the considerable investment required

The Lure of a Kitchen Garden

By W. L. Nelson

FOR four seasons we have had a garden plot only 20x25 feet. On this small tract of ground we have grown all the vegetables, except potatoes and sweet corn, needed for our family of three persons. Furthermore, the surplus garden products given away would, if sold, have more than paid for all the roasting ears and potatoes that we bought. The results we have obtained with our small garden can be greatly increased where more garden space is available and there is the spare help to take care of it.

Last year in this little backyard garden we grew lettuce, radishes, onions, peas, beets, bunch and stick beans, tomatoes, cucumbers, sweet peppers, okra, bunch lima beans, and celery.

Of some vegetables three or four varieties were grown. There were four varieties of radishes, from the small round ones to the larger long varieties suitable for midsummer use. Of peas four plantings were made. Now, there are many who say that in a small garden peas should have no place, that the ground can better be utilized for other crops, and especally those that will continue for a longer time.

Our answer is that for one who cares for really good peas it pays to grow them, especially when to do so does not lessen the available room for other later crops. In our little garden the peas are so planted that when the vines are removed another crop is ready to occupy the ground. On the market it is possible to purchase good potatoes and various other vegetables, but not good peas, at least not often.

Peas, to be at their best, should be gathered while still small and tender. Furthermore, the chemical changes that take place in this vegetable are more marked and more rapid than in almost any other. There is all the difference in sweetness and in flavor between peas that have been off the vine from twenty-four to forty-eight hours when compared with those gathered in the forenoon and served at the midday meal. So we say that for one who really cares for peas the best way to have them is to grow them.

In growing peas we have not found the strictly dwarf varieties best. Personally we prefer the semi-dwarf kinds, as they require less room and yield more abundantly. If bits of brush are not available for sticks, a few short kindling pieces may be driven into the ground on each side of the rows about 8 or 10 feet apart. Binder twine or cord of any kind may then be strung on these, a round being added from time to time as the vines gain in height. Late varieties, such as Champion or England, require strong stakes or trellises not less than four feet in height.

Our little garden spot was not naturally fertile, but a few loads of street sweepings the first year, followed by from 20 to 30 wheelbarrow loads of stable manure each year thereafter, keep it productive. In spading it we have always gone as deep as the spading-fork tines would allow. In the soft, mellow, humus-filled soil spading to this depth is a comparatively easy task. Beginning with good soil and deep tillage, the conservation of moisture, even in a dry season, is not difficult.

We have had a splendid garden when other gardens in the same vicinity were burning up. Nor have we often attempted to supply moisture by use of a hose. Two years ago, when there was practically no rainfall, we did give our late garden two or three thorough soakings. At the time of applying the water the soil was loose and mellow to a depth of several inches. After the water had been applied and as soon as the ground was dry enough to be worked, it was stirred so as to prevent the formation of any crust and to provide instead a thorough dust mulch. A slight sprinkling of the garden every few days induces a shallow root growth, and more harm than good is done. We practice level planting exclusively, making no hills or ridges. With this method and in rich soil, rows may be only half the ordinary distance apart.

In planting the earliest vegetables we always plan to let later growths come in between. For this reason, to one unacquainted with our plan, it would seem that when the early lettuce, radishes, onions, beets, and peas are in the whole garden has been planted and that there is no room for anything else. A little later, though, rows of other vegetables are seeded right in between these, just as if they were not there.

By this time, it must be acknowledged, things are pretty badly crowded. In our little garden we have had 20 rows of vegetables all at once, with double plantings, such as tomatoes, set in the radish rows. Necessarily, this condition made even hoeing difficult, so that most of the work of cultivating, for the time being, was done by using a hand weeder and spading fork. Soon, though, the rows of radishes, early peas, lettuce and onions—ten in all—were removed.

In the meantime we had set 48 pot-grown tomato plants, each plant with a piece of paper wrapped around and extending from just beneath the soil to about two inches above, as a protection against cutworms. A dozen sweet-pepper plants—more than we needed—had been started. By July 4th, the date at which we have generally figured to have our first ripe tomatoes, though we have not always been quite able to realize our expectations, the garden is made up of beans, tomatoes, cucumbers, peppers, okra, and perhaps some late beets. Again the garden seems full so that a visitor viewing it for the first time would conclude that we had grown no early garden.

By the time the bunch beans are gone, the taller varieties grown around the edge of the garden and allowed to trail on the woven-wire fence are ready for use, and continue throughout practically the entire season. Beans and tomatoes make up the most of the late summer garden, but before cold weather head lettuce and celery are growing between the rows of tomatoes. Celery, as every experienced gardener knows, heads best in cool weather only, the growth here being made principally in September.

While we enjoy growing all vegetables for which we find room, tomatoes afford us our greatest pleasure and largest profits. One morning last summer we gathered 47 pounds of fine ripe tomatoes, while 20 to 30 pounds a day were not uncommon. In addition to having tomatoes fresh from vine to table—by way of the refrigerator—for three months, 48 quarts were canned for winter use. A number of neighbors were also given occasional treats when we had a surplus. Our little boy—and everybody who has a boy should have a garden—had four vines of yellow Ponderosa for his "very own," and it was with a great deal of pride that he gathered these and contributed toward an especially pretty and delicious dish when company came.

Our garden grows gleefully on when other gardens in the same vicinity are burning up

For tomatoes the most satisfactory stake that we have ever tried consists of two pieces split from heavy boards, such as are used in shipping boxes. One piece is sharpened and this nailed to another. Two 4-foot pieces will give a 7-foot stake, allowing one foot for lap. The shoulder, formed where the pieces are nailed together, affords an excellent place on which to hammer when the stakes are being set. We keep all suckers picked off the tomato vines, allowing only one or two main central stems. During the growing season the vines should be gone over, suckered, and tied up every few days. Cloth strings—from rags of any kind—should be used so as not to cut or otherwise injure the vines.

The following extracts from our garden notebook—and every gardener, whether amateur or professional, should keep a notebook—give a general idea of the progress of the work here in southern Missouri during an average season:

"March 17th, sowed lettuce; March 23d, planted radishes, onions, and early peas; April 12th, planted beets and more radishes; April 18th, had first radishes from garden; May 6th, planted most of garden; May 8th, set tomato plants; July 11th, first ripe tomato; August 20th, planted beans, radishes, lettuce, and celery plants; October 18th, had green beans, lettuce, and tomatoes fresh out of garden."

Notice that it was exactly six months from the day the first radishes were ready to eat until the date on which the last vegetables were gathered before the coming of cold weather. This does not take into account a bushel of green tomatoes picked from the vines just before frost, some of which were kept until ripe, and 40 heads of lettuce and 130 bunches of celery. On October 20th there was a light snow, but it soon melted.

A week later, after having spread 30 wheelbarrow loads of well-rotted stable manure over the surface, the entire garden patch, except where the presence of celery and lettuce prevented, was spaded good and deep.

This fall clean-up and spading of the soil of the entire garden are of much importance for several reasons. The turning over and mixing of the soil and manure allows the rain and melting snow to fill the subsoil with moisture, the plant food in the manure is less likely to be lost by washing and leaching, and the insect pests that have hibernated in the leaves, rubbish, and top soil are in great measure destroyed. Last, but not least, the lower soil stratum turned up better receives the frost action, and in consequence is in condition to be much more easily brought into good tilth in the spring.

When the garden soil is handled as I have described, we find no advantage in respading or preparing the seed bed much in advance of planting unless the spring is so dry as to endanger the moisture supply by evaporation. But should continued drying weather prevail before planting time, spading and a surface mulch check the escape of moisture. In any case, nothing is gained by trying to hurry plants into the ground before conditions are favorable for their growth.

From our little garden we have averaged annually $50 worth of vegetables. Furthermore, we have had vegetables of a quality such as we could not have bought on the market. Best of all, we have added to our health and happiness while doing our bit in food production and conservation.

A neighbor holds back the vines while I take a picture of some of the tomatoes

FARM AND FIRESIDE

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MAY 1918

If Your Copy is Late

ALTHOUGH railroad congestion has been relieved to some extent, not all of the mail trains are running on time. If your copy of FARM AND FIRESIDE doesn't reach you promptly, please wait a few days before writing. The magazine will probably be in your hands by that time.

Farmers and Freedom

THERE is no man to whom liberty and democracy mean more than to the American farmer. To him all men have always been on a level. He has refused to recognize class distinctions. He has steadfastly declined to adopt any specific garb or to join any specific political party. The farmer has always wanted, not the priviliges of a farmer, but the privileges of an American citizen.

The American wars have been fought largely by farmers. The plainsman, engaged in a hand-to-hand conflict with nature, has been ready, when the call has come, to fight the enemies of his country.

This is only natural. The United States stands for democracy, and it is under democracy that farming and the farmer himself best thrive.

The farmer is fulfilling his best ideals in investing in Liberty Bonds, subscribing to Red Cross work, and engaging in the other war activities in which figures show he is becoming more and more interested. It is true that some other groups of men made larger subscriptions at first. There is here, however, no ground for criticism of the farmer. The city man who is approached by half a dozen solicitors in a day, who attends two or three war meetings in a week, is in quite a different position from the farmer. The city man was easiest to reach, and was reached first.

Now that the farmer has been reached, however, he is gradually getting the edge on the city man, and when the returns are finally checked up at the end of the war it doubtless will be found that again the farmer is first, not only in the men he has furnished for the struggle, but in the liberality of his contributions to the funds necessary for carrying it on.

A Real Clean-up Day

WHEN the town of Mitchellville, Iowa, with a population of 900, decided on a general clean-up, a woman arose in meeting and promised the help of the women in every way possible. She suggested that perhaps about all they could do would be to cook a picnic dinner. Whereupon one man arose and gave it as his opinion that inasmuch as Iowa was in a fair way to have equal suffrage shortly and the Mitchellville women had been insistent upon it, he, for one, thought the women ought to work alongside the men on Clean-up Day. And work they did!

While other towns were content, on such occasions, to remove the unsightly ash heaps that disfigured back yards and otherwise make more presentable the general municipal appearance, the Mitchellville workers decided there was no reason why every able-bodied man and woman should not put in ten good, solid hours' work on the roads leading into the town.

Roads, they argued, were a country town's principal asset, as without them the country trade, which kept the town prosperous, was not forthcoming. What if there were an ash heap left at night, would it not be better to have a few miles of good roadway all completed, so the farmers could come in with produce and go back with their wagons and automobiles filled with all sorts of store goods?

So men and women alike of Mitchellville worked all day long, though the sun was hot and the work was hard. To-day the Mitchellville speedway, six miles long, is a monument to the efforts of the men and women of Mitchellville who decided that a Clean-up Day should mean something more than just idle talk and newspaper publicity.

Silos Will Help

PROGRESSIVE cattlemen and dairymen have shown conclusively by actual practice that the amount of stock can be doubled by using silos. Particularly is this true of the smaller farms where the pastures have become unproductive and the hay crops uncertain. Many such farms now limit the stock kept to the number that can be pastured safely when the seasons prove unsuited to the growth of pasture grasses, such as during a droughty midsummer.

It is not now difficult to find plenty of 60- to 80-acre farms without silos where the number of dairy or beef cattle kept does not amount to more than one animal for each 10 or 12 acres. After installing one or two silos on such farms, it is a common occurrence to find the stock nearly doubled within two years' time.

The waiting silos, hungry to be filled, exert a constant stimulus to increased production of fodder crops, better culture and fertilizing supplied, and improvement of the crop rotation. With sufficient silage storage the danger from frost and unsuitable harvest weather is removed, and the operator feels he can play comparatively safe in enlarging his stock operations.

Of late it has been well shown how important a generous store of home-canned foods is in the economic administration of family affairs. Similarly the silo has the same relation to cattlemen as well-stocked shelves of canned farm-grown goods has to the housewife.

Were a half-million more silos installed on American farms during the next two years, our meat, fat, and dairy supplies could be placed well above the danger point. Fats and meats are the most necessary foods for the soldiers, and increase of silos is a direct way of helping them in their work to victory.

Next Year's Corn Bread

MORE than 100,000,000 acres will be planted to corn in the United States this spring. It is a national need that every one of these acres produce a maximum crop. This year testing seed corn is not only a mighty well-paying method of insurance, but also a patriotic duty.

In most of the corn belt the corn last summer did not mature properly. A great deal of it was soft. Some of this has dried out, and may appear to be just as good as any corn that ever was grown. In all probability, however, the germ is dead, or nearly dead,—in such condition, at best, that if planted it would fail to produce big, vigorous stalks.

At the same time, the price of corn is high—too high for a man to waste in the ground seed which will not grow but which might be fed to live stock; too high also for one to waste any corn land by planting seed that will not yield a crop. The dead corn ought to be fed to live stock, and the live, vigorous kernels ought to be planted.

A germination test is the only sure way of finding out whether corn will grow or not. The high-school teacher of agriculture in any community will be glad to have his class test the seed corn. It will give the boys practice, and will at the same time help the community.

If a man prefers to test his seed himself, the process is simple and inexpensive. It will take little more time than it takes to grease the wagon that has stood in the shed during the winter. And it would be a good deal smaller loss if the wagon should wear out than if the corn crop should fail.

Honey in a War Year

AS a side line in addition to his regular work, a veterinarian in the Middle West got a carload of honey from his neighbors' fields and orchards. It was little trouble for him—his bees did the work. The neighbors did not object, for the bees helped in the fertilization of the plants as they gathered honey.

In this year of war, with a shortage of sugar, more farmers will find it profitable to keep bees, and the man who now keeps bees will find it profitable to give them better care. The old adage runs:

A swarm of bees in May
Is worth a load of hay;
A swarm of bees in June
Is worth a silver spoon;
A swarm of bees in July
Is not worth a fly.

And the adage is worth remembering, for it is correct as far as it goes. It is worth remembering also, however, that no swarm at all is better than all the rest put together. If bees can be kept in the hives, supers may be put on to accommodate their needs. If, on the other hand, they are permitted to swarm, they must fill ten frames in a brood chamber before they can furnish surplus honey for the owner.

Modern study of bees has shown that in many cases swarming can be prevented, and that when it cannot be prevented it can at least be brought about early. Swarming is caused by the presence of too many young bees. To prevent it, there should be plenty of room for raising brood and for storing honey. The raising of extracted honey is also a help. Keeping the hive ventilated at all times, protecting it from the heat of the middle of the day, and the introduction of a young queen from non-swarming stock in the early honey flow are further steps that the live beekeeper takes to secure his "load of hay"—or even better.

Tons of honey go to waste every year through lack of bees and through failure to care for bees in the most efficient way. But this year is no year for waste.

The Wheat Situation

LAST year the winter wheat crop was 62,000,000 bushels less than the year before; the spring wheat crop was 77,000,000 bushels more than the year before. The Government made every possible effort to bring the winter wheat crop up this year, so as not to place the entire burden upon the spring-wheat grower. As a result, the acreage seeded to winter wheat was increased four per cent, the entire area being estimated by the United States Department of Agriculture at 42,170,000 acres. What the harvest will be remains to be seen, but there are indications that the burden of saving the bread situation remains upon the backs of the spring-wheat growers.

The three States of Minnesota, North Dakota, and South Dakota—named in the order of their wheat production last year—produced only 162,000,000 bushels of spring wheat in 1917, whereas two years before one of these States alone—North Dakota—produced more than 150,000,000 bushels. Rust in 1916 and drought in 1917 cut down the production.

Every possible aid has been given the wheat growers of the Northwest, in the hope that their crops may be abundant this year. The legislature of North Dakota was called in special session for the express purpose of enabling counties to issue bonds to buy seed wheat, test it, and sell it to farmers at actual cost, plus the handling charges. The farmers gave their notes for the seed. These notes draw six per cent interest and are due October 1st—after harvest.

The movement did not stop there. Wheat substitutes, produced in the wheat belt in large quantity, are bringing higher prices than wheat; the temptation was for the farmer to abandon wheat and take up the substitute. Appeals were issued, making it a matter of patriotic duty to grow wheat.

But this was not all. At last reports the federal land banks which serve the spring-wheat and the winter-wheat belts had lent more money to the farmers of their districts than any of the ten other federal land banks. The wheat growers were given seed and money, and were urged to do their patriotic duty.

In the meantime the eyes of the world are upon the American wheatfields, and hungry mouths are momentarily stilled in the hope that the American farmer, aided by Providence, may raise that 1917 wheat yield from 650,000,000 to the billion bushels needed to feed the United States and her allies not only next winter but until the 1919 harvest.

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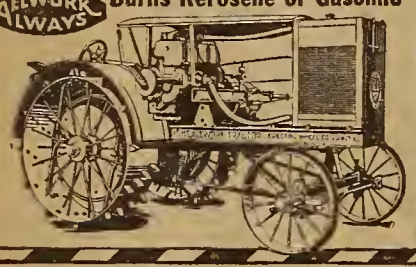

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American Red Cross in War-Scarred Europe—*By John Coleman*

WAR-SCARRED Europe to-day knows the work and message of the American Red Cross. No nation has been overlooked; the weak, little ones, which have been crushed beneath the iron heel of war, have been ministered to with as much affection and care and skill as those major peoples upon whom the ultimate victory of civilization depends.

Serbia, Roumania, and Belgium have been succored as well as France and Italy; the hapless deported Armenians have been sent money and supplies; Russia, stumbling in the throes of internal chaos, has been helped; and in Great Britain American Red Cross activities have covered a wide field.

What the Red Cross is doing for America's allies in the war is on the same footing with what it is doing for the rapidly increasing forces under General Pershing, for which it is sending abroad, fully equipped, base hospital units and ambulance companies; recruiting, training, and organizing a great reserve of nurses; establishing canteens and a personal welfare and communication service which is of the utmost value to American morale.

The extent to which the American Red Cross is carrying on relief work in Europe may be judged from the fact that up to February 1st it appropriated nearly $45,000,000 for this purpose, not including more than $14,000,000 given to the purchase of supplies for the work in foreign fields.

Of this vast amount more than $38,000,000 has gone to gallant France, where the Red Cross is conducting what is beyond doubt the greatest work of relief and reconstruction ever done by one people for another. It is for the American people a true love's labor and a partial payment of a national debt that has been compounding interest since Revolutionary days. A review of what the United States is doing for France under the shield of the Red Cross should send a thrill of pride to every American heart.

What are we doing for the civil population of France—the millions widowed and orphaned by war, the aged and the babies preyed upon by poverty and disease, the homeless repatriates who, being too weak to work and sucked dry of plunder, have been contemptuously tossed back by Germany from the occupied French provinces to their own countrymen?

When the Germans retreated last spring and summer to the Hindenburg line, a strip of France was thus reclaimed to the Tricolor—but what a strip it was! Laid waste by the Boche, homes wrecked and all villages blotted out so as to give the advancing French and British nothing but a barren desert to gaze upon, the remnants of its population were found huddled in hovels underground, stripped even of the smallest household utensils.

For this reconquered section of northern France huge warehouses have been built, through which food, furnishings, clothing, farm machinery, and supplies of all sorts are distributed to the destitute by the Red Cross. Model villages have been constructed, French workmen under Red Cross direction and pay have repaired houses and barns so that normal living conditions could be restored speedily and the work of the destroying Hun set at naught.

The bulk of the Red Cross work done here, as elsewhere in France, is done through French agencies—397 grants of goods have been made to 322 organizations. Take the work for the orphans and the homeless waifs, who are to be found on every street corner in France. No less than 22,000 of these pathetic little folk have been reached directly by the Children's Bureau of the American Red Cross, and 26,000 others have been helped in co-operation with French organizations.

Refuges, dispensaries, and clinics supported by American funds are to be found all through the war zone. All of the repatriate French and Belgian children at Evain—which is the receiving depot on the Swiss border where the Germans turn those too young and too old to be scourged into slaving for them to the French authorities—are examined and cared for by Red Cross doctors and nurses, and there is an American chidren's hospital at that point.

Relief for the blind and mutilated French soldiers is effected in many ways. Recently the Red Cross leased a 500-acre farm near Tours, where these maimed poilus learn the use of American farm machinery and are made self-supporting. Four tuberculosis hospitals for soldiers and civilians are maintained and managed exclusively by the Red Cross, 96 French hospitals are aided with funds and supplies, possessing a total of 5,600 beds for tuberculous patients, and a vast amount of visitational and educational work is being done—all a part of the vast program of social service for France that is being carried out.

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The American Hospital at Neuilly, France

Here is the way that Henry P. Davison, chairman of the War Council of the American Red Cross, described one phase of the work being done for the French soldier:

"Up to a few months ago a French soldier of the devastated region, after being in the war zone for four months, came out for his ten days' leave. His clothes were torn and covered with vermin, his shoes were out of repair, and his spirits were low. He came out to go to his home. But he had no home; his home had been swept from the earth as clean as that floor, and his mother or his wife or his children had gone—he did not know where, any more than you know.

"To-day as that Frenchman comes out of that trench he is met by your Red Cross representative, and he is taken to a structure that you have arranged. His clothes are taken from him and sterilized and mended. Then he gets cleaned, and as much rest as he wants. He is taken to the place where his home was, and there he finds a structure, temporary in character, which you have built for him, and within that structure he finds his mother or his wife or children, whom you have found for him.

"He finds them provided with food, with clothing, and with fuel. He spends his holiday, and then goes back to the trench. What effect do you suppose that has had on that French soldier?"

This is the barest summary of what is being done in France. What of Italy? When the Germans and Austrians smashed the armies of Cadorna on the Isonzo last fall, Italy cried out to the world for help—and the American Red Cross was first on the scene. What was done then for those hosts of refugees pouring down from the north, for the soldiers who had been betrayed and did not know where their retreat would end, for the northern provinces distracted by the fear of invasion and despoilment, saved Italy for the cause of the Allies, in the opinion of many competent judges. The American Red Cross appropriated $4,771,000 for Italian relief. It rushed foodstuffs, medical supplies and blankets, and surgical dressings to the scene; established canteen and rest houses for refugees and homeless families; put a hospital and ambulance service at the disposal of the army. The work for the army is now being expanded.

Roumania, the war's most tragic victim, now hemmed in on all sides by the enemy, has been aided by the Red Cross under great difficulties. More than $2,610,000 has been appropriated for relief of the little kingdom of Queen Marie Victoria, where typhus has added to the horrors of famine and destitution. All supplies had to be sent via Russia, where transportation virtually was at a standstill, and the Red Cross Commission accomplished wonders under the unfavorable conditions.

In Serbia the work of Red Cross, for which $875,000 has been appropriated, has many angles: a tuberculosis sanitorium containing 600 beds has been established near Saloniki, and for the 40,000 Serbs huddled in the villages around Monastir plans have been made to provide seeds and farm tools for the cultivation of the 21,000 acres of fertile plain in that section of the country.

The cargo of foodstuffs and supplies, originally consigned to Beirut for the Syrians, but held up in the harbor of Alexandria without hope of reaching its destination in time to be of service, was purchased at a cost of $127,000 and distributed among the Serbs, whose need for food and clothing was imperative.

More than $750,000 has been appropriated for the work in Russia, despite the unsettled political conditions there. During January enough condensed milk was shipped into Petrograd to help save the lives of 25,000 children, and efforts will be made to continue these shipments at the rate of 1,000,000 cans a month. In the past large quantities of supplies have been shipped to the ragged and ill-nourished Russian soldiers, as their own country was unable to furnish sufficient aid.

For Belgium, first martyr of the war, a big work is being done, for which more than $2,000,000 has been appropriated. Reconstruction in Belgian towns will be done in co-operation with the Belgian Government. The Belgian children and orphans are cared for and schooled. Warehouses and stores are to be built along canals and highways which will serve as centers for the distribution of relief.

To the war fund of the British Red Cross $953,000 has been given, half of which is for institutions in Great Britain for orthopedic and facial treatment, and for general restorative work for disabled British soldiers. The balance is for the purchase of hospital supplies and medical work on the British front.

This is a glimpse of what the American Red Cross is doing in Europe for the cause of civilization and for the future of the world.

Machinery

Be Sure of Your Planter

By H. H. Haynes

IT IS nearing the time to plant corn. Then it will not be so very long until you will be cultivating corn. And when you cultivate, will there be two and three stalks in every hill, or will the hills vary from none to five stalks? Next to selecting good seed, there is only one way to overcome this variation, and that is to be sure your planter drops the number of kernels that you intended it should. The only way to be sure is to get it ready now. This process is called "calibrating the planter."

With a block of wood or a box, jack up the machine so that the tongue is well off the ground. Put one or two handfuls of the seed you intend to plant into one of the two planter boxes. Spread a

Sharp tools save time and patience

sack or piece of paper on the ground under the heel of the planter shoe to catch the corn as it falls, and trip the lever at about the same speed your team walks when planting corn. Catch the kernels in your hand, and as you count them let them fall on the sack or paper. The best authorities advocate the 2-3 drop—two or three kernels to each hill.

Repeat the operation with the other planter box. It may be necessary to change the plates several times to get the desired drop, but it will be time well spent.

No Tractor Shows in 1918

THE Tractor Demonstration Committee of the National Implement and Vehicle Association at its meeting in Kansas City, February 13th, decided that unless transportation facilities were much improved no tractor demonstrations would be held during 1918.

This action was taken after a thorough discussion of existing conditions regarding transportation, and the sentiment was that it would be neither patriotic nor practicable to impose on the

Ahead of the planter

already congested condition of the railroads the hauling of tractors and their equipment which such demonstrations would necessitate. If at some future date the transportation situation is relieved, demonstrations will probably be held as usual.

WHEN the outside of the engine is very oily, look for leaks around the gaskets, spark plugs, or other openings.

Serving By Saving—
Saving By Building

THE farmer has the greatest opportunity for war-winning service "over here". He feeds the world. Every extra bushel of grain he saves, every pound of feed he keeps from waste, everything he does to increase production—makes the road to victory shorter. It takes Farm Buildings to save grain, stop waste, and take care of increased production, when prompt shipments are impossible. And the time to build is NOW when

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You're losing dollars to save pennies if you fail to build your Farm Buildings NOW!

Southern Pine Association
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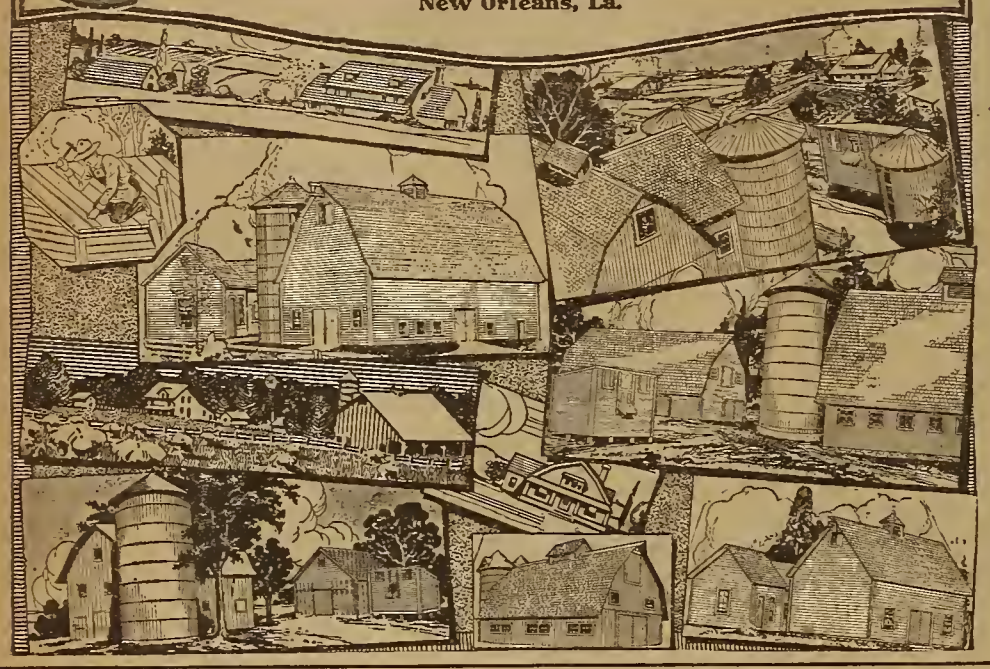

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Don't waste time wishing for clothes that other women have. You can have them also, if you will devote a few minutes a day to looking after the interests of FARM AND FIRESIDE in your own community. The work is delightful and pleasant, and the extraordinary nature of the proposition affords a money-making opportunity seldom offered. Write to-day before it is too late to

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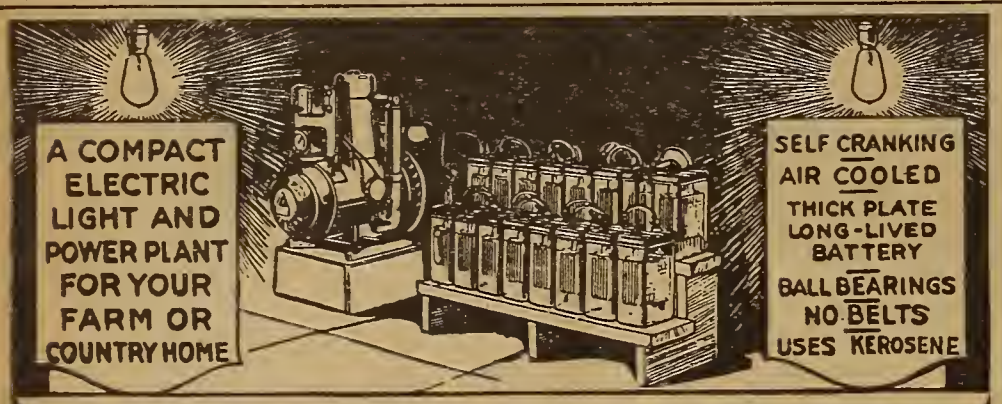

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Building

The Bungalow

By William F. Miller

WHEN the sleeping-rooms of a dwelling are on the same floor with the rest of the rooms, the term bungalow is applied. When the sleeping-rooms are on the second floor, the building is a house.

In planning the bungalow type of building, condense the arrangement as much as possible. If you are compelled to keep down the cost, avoid angles and

A bungalow large enough for a small family

ells in order to build the foundation and roof in straight lines.

Without doubt, the one-story abode has an important argument in its favor. Everything is on a level, eliminating the continual climbing of tiresome stairs.

There is one rule in building the bungalow that should be broken: instead of setting the structure close to the ground, as the real character of that class of residence suggests, set it up so the lower edges of the first-floor joists are at least two feet from the ground. This should be done to get the proper light in the cellar; then the floor joists are not so apt to rot from the moisture in the ground as they will when placed so near the earth. It is simply a case of breaking a rule to be practical.

Fighting Fire on the Farm

HENRY MORRISON, an Indiana dairyman, had a recent experience which he will never forget. One night he was awakened to find his bank barn afire, and beheld the product of a summer's toil going up in flames. Of course, it was partly insured, but not for its real value. His fire-fighting apparatus was very crude, consisting of a few water buckets and a small rubber hose. The

A concrete pit prevents plant food in manure from leaching away

wild efforts made by him and his neighbors to control the blaze were futile, and every large building, except his house, was destroyed.

This experience taught Mr. Morrison a very valuable lesson. He purchased a hand hose cart with 500 feet of two-inch hose, also several fire extinguishers of the hand-operated type.

Then he built a large reservoir, and installed a high-powered gasoline engine to force the water through the hose. This reservoir and engine he uses for other purposes.

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We know the rest of the family will enjoy town life, but unless you get into a business where your experience and acquaintanceship in the community count, it is mighty tiresome for you.

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Easy terms, conscientious assistance, sales helps, all included when you enter this big, profitable business.

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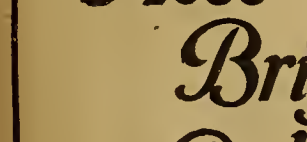
Everyone eats bread—takes flour to make bread—you make the flour. Write!



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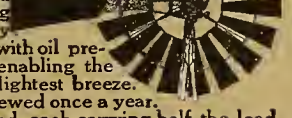

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YOU never question the jewels (bearings) of your watch. And some day you'll know tractors just as you know watches. Then you'll believe in

Hess-Bright Ball Bearings

Crops and Soils

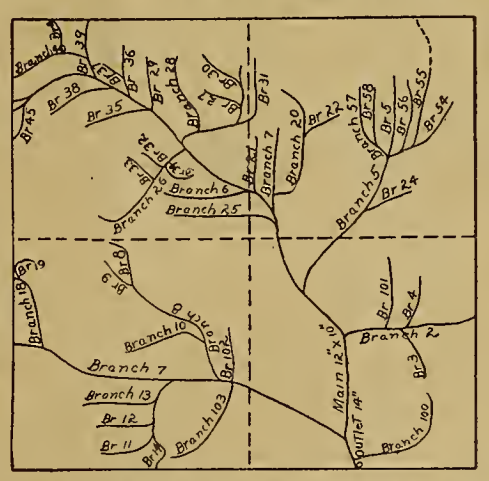
Make Idle City Men Work

By Clarence DuBose

"THE best way to draft farm labor," Clarence Ousley, Assistant Secretary of U. S. Department of Agriculture, told the Texas Legislature, "is for you to amend your vagrancy law so as to include within its terms every able-bodied man who does not do six days' work each week as a rule."

In many States of the Union, either by state legislation or local action, steps have been taken or plans are under way to require idle men to go to work. Farmers know they cannot increase their food-crop production unless they have more labor. Town people know they will suffer inconvenience or want, and have to pay very high prices for the reduced rations they are able to buy, if the farmers do not increase production. And both farmers and town people know, as all the world knows, that we can't win the war unless we have ample food. So, States and counties and towns the country over are determining that this is not a time, nor theirs a place, for the toleration of idlers.

For instance, a few weeks ago the sheriff of Grayson County, Texas, a thickly populated and highly productive agricultural section, announced in the Sherman papers and by posted proclamation that "every man must go to work." This sheriff didn't wait for the State Legislature to enact new laws. The old ones are strong enough to suit him. "Go to work or go to jail," he said crisply. "No man will be allowed to loaf around this town or in this county, because we are at a point where every man's labor is seriously needed for the farms."



Here is the diagram of a tile-drain system on a 160-acre farm

What about your county? What about your State? Are you requiring loafers to become producers? While your sons fight in France, will you permit husky men to remain idle in your community, when their labor will produce food without which we can't win the war, without which your son fights in vain?

Osage Fence Posts

By Floyd K. Sanborn

OSAGE orange or catalpa trees make the most desirable fence posts. The Osage orange is hardier and will grow on drier, poorer soil than the catalpa.

The Osage orange post has been known to have been in use for forty years. One objection to these posts is that they will season-check, allowing staples, driven in when the posts are green, to fall out, while the wood becomes so hard, when posts are allowed to dry, that staples cannot be driven into them.

For best results in growing Osage orange for fence posts the trees should be planted in rows 18 feet apart. Planting one-year-old trees is the most economical method. Good posts may be obtained in this way in twelve or fifteen years. From these stumps sprouts grow which will produce a second crop in eight to ten years.

By setting the trees in rows they may be cultivated and trimmed easily. If they are allowed to grow with no care they form a place for the growth of weeds and are inclined to grow bushy. Posts must be thoroughly seasoned before being set in the soil.

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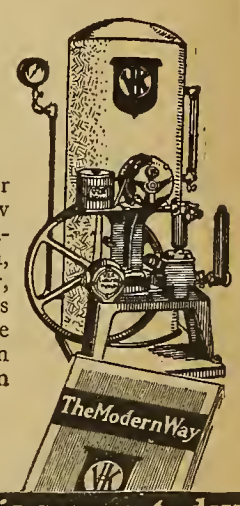

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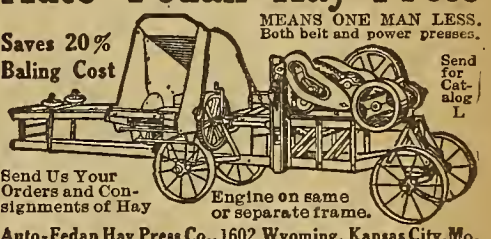

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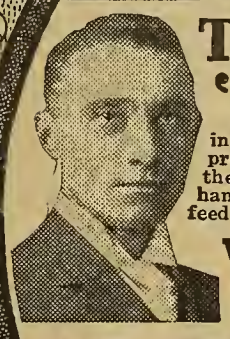

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in every WITTE Engine that automatically preheats the mixed charge of fuel before it enters into the cylinder. That is why WITTE Kero-Oil Engines are as easy to handle and operate as a gasoline engine, use less fuel than "continuous feed" kerosene engines and give the most power from the fuel used.

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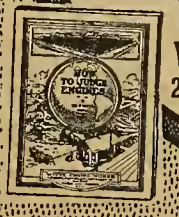

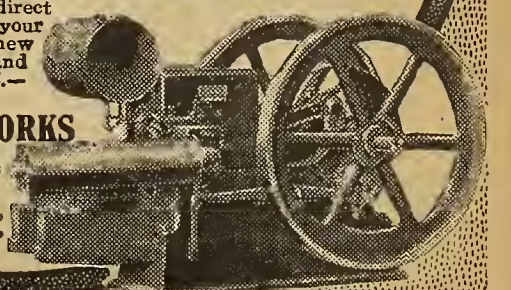

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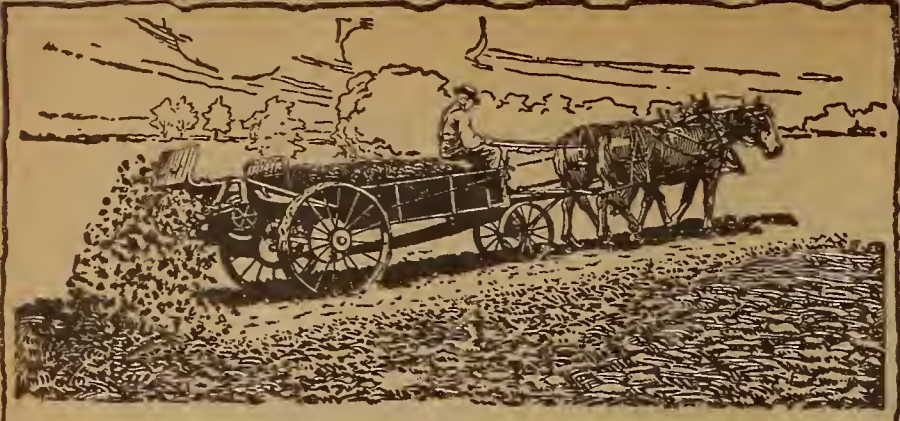

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WE have added the **New No. 8** Spreader —spiral wide-spread, light-draft—to the **Low Corn King, Cloverleaf** and **20th Century** lines. We are in a position to suit exactly any farmer, whatever his previous spreader experience has been.

If you have not yet had an opportunity to study the features of the No. 8, the spreader for every average farm, the lightest-draft spreader made, write us and we will put you in touch with the dealer. No. 8 has the famous International spiral wide-spread that has thoroughly demonstrated its success as a wide spreader for all-around use. In addition, the **Low Corn King, Cloverleaf** and **20th Century** lines provide you with your choice of larger capacity spreaders, with the regular disk wide-spread (well known wherever spreaders are sold) or with the spiral spread on special order.

The **New No. 8** Spiral Wide Spreader and other **Low Corn King, Cloverleaf** and **20th Century** spreaders will go onto many thousands of farms this year. They are all light-draft, low-loading, easy-handling, built of steel—and satisfactory. It will pay you to write us for catalogues. Write the address below.

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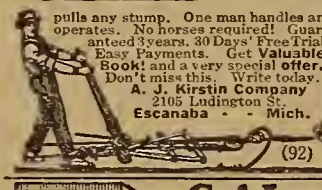

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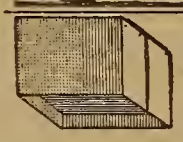

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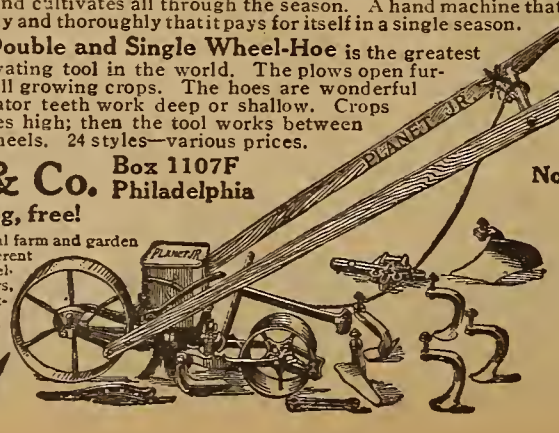


Garden and Orchard

Shall I Grow Everbearers?

By B. F. W. Thorpe

CONSIDERABLE difference of opinion now exists regarding the profitableness of everbearing strawberries, of which there are now being grown at least a dozen varieties and many more in the process of development.

These strawberries, having a longer fruiting season, require more care, better culture, and generally more favorable conditions than the more common sorts in order to do their best; but when the soil culture, fertility, and moisture are kept just right the season through, the everbearers will produce practically as heavy yields from July to the time of killing frost as the average crop harvested from spring-fruiting varieties.

Grown under especially favorable conditions, from 1,000 to 1,500 quarts an acre may be expected in favorable seasons from the Progressive variety, during the fruiting season of the first year after setting. But the early crop the following spring will be small both in yield and in the size of the berries produced.

The Superb variety produces less than the Progressive the first season after the plants are set, but the early crop the following spring will be fairly heavy and the berries will be of good marketable size. Practically all of the newer everbearing varieties resemble either the Progressive or Superb in type of growth and production.

Unless the strawberry grower is prepared to give the more intensive cultural attention needed, and can devote three months to keeping the everbearers picked and marketed, he had better grow the spring-fruiting sorts. But in some cases, where especially favorable marketing is assured, the everbearers will furnish larger profits.

Best Profits from Asparagus

By F. J. Harrington

HERE in New England most small growers of asparagus fail to get the best profits from this crop. Those who make a specialty of asparagus and have their grades uniform in length of bunches, butts of same size, and keep the green and white stalks unmixed, have a distinct advantage in marketing.

Equipped for rapid bunching

The best profit comes, I find, from the smaller and more tender stalks, sold to more discriminating buyers who have their preferences for green and white stalks. The general buying public is content with the larger and coarser bunches, which require longer to develop, but when the cutting is thus delayed the vigor of the plants is lessened.

It has been my experience that a bunching equipment consisting of suitable tables and racks for holding the assorted bunches, first-class tying machines, and containers for holding the finished bunches, all conveniently arranged, greatly facilitates getting the asparagus ready for market. This equipment we use in or out of doors, according to weather conditions.

As a rule, our earliest crop brings us the most profit. But when there is an opportunity to sell to summer campers we keep cutting until well into July. This plan requires the beds to be renewed oftener, but by additional fertilizing and intensive culture several profitable crops are secured before the renewal of the beds are necessary.

Spraying a Few Trees Pays

THE opinion is frequently expressed that the spraying of fruit trees is an unprofitable operation except for commercial-sized orchards. But this idea has been proved wrong many times.

Spraying tests made in 1917 in small orchards, varying in size from eight to

Convenient hand tools and special weeders are real helps in intensive gardening

twenty-four trees, in eight Missouri counties where the trees had never before been sprayed, showed the average cost of spraying the trees in the eight orchards was 59 cents for each tree sprayed, and the average profit from the sprayed trees was $5.26 per tree.

In some of the spraying operations cited, less than a dozen trees were sprayed. In the orchard of G. C. Kinder, only eight trees were sprayed, at a cost of 75 cents per tree, and the profit resulting was $8.75 per tree. Louis Hackman of St. Charles County sprayed 21 trees at a cost of 80 cents per tree, and his profit was $9.73 per tree.

The apple trees mentioned were given the usual three or four sprayings. Equally good results can be secured in thousands of home orchards where now nothing but a few nubby, worm-eaten, scabby apples are harvested.

Take a Chance with New Seed

HERE in my home community in Jackson County, Kansas, nearly every grower of potatoes for home consumption has been wedded to the Early Ohio potato, which is a good variety in favorable seasons, but it fails to withstand early dry periods. Now there are symptoms that the potato-growing habit here may change. For two years past two or three intrepid souls have broken away from the Early Ohio and took a chance with the Irish Cobbler. One of my neighbors who experimented with the two varieties mentioned grown side by side under selfsame conditions, at digging time found the same quantity of seed, the same labor, care, and cost had nearly doubled his production in the case of the Cobbler.

The Home Peach Orchard

TWO or three peach trees of high-quality fruit can be made to furnish the average family with an abundance of delicious fruit, both for fresh table use and for "putting up," while they are in season. But in order to have a long succession and enjoyment of various flavors and no small satisfaction of picturesque beauty in addition to good eating qualities, at least half a dozen varieties should be grown. Some are not so desirable for eating fresh, but when preserved, pickled, or canned are food fit for the gods.

Were I to set a home peach orchard of a dozen trees to-day, here are the varieties I would plant in their order of ripening: Alexandria, Greensboro, Carman, Champion, Belle of Georgia, Matthews Beauty, J. H. Hale, Elberta, Crawford, and Krummel. Of these, the first two are clings, the first five white, more or less splashed with red, and the remainder yellow. From Champion to Elberta furnish the highest in quality.

With these varieties fresh peaches may be had from July to late in October.

Our Farm's "Come-Back"

[CONTINUED FROM PAGE 7]

pets of town residents, and several sleek family horses grazed in the cleaned-up pasture field, while in the garden with its neglected cabbages, turnips, carrots, and weedy corners six fine sheep nibbled daintily at the still green stuff.

"Well, what did he say?" I demanded of the agent after the man and his wife had driven away.

The agent hesitated, and after much persuasion he said: "It's the house Mrs. Anderson objected to. She says it is too dark and stuffy to be healthy. But for that he'd give $90 an acre."

Much as we dreaded to see cold weather come, we made every day profitable and the winter passed all too quickly. Paint, cheap, pretty wall paper, dainty curtains made out of inexpensive materials, and hard work transformed the interior of the house, while Will and Billy made the old barn snug and comfortable for the profitable boarders. The evenings were given over to reading attractive advertisements of Western and Southwestern lands, and the entire family looked forward eagerly to the pleasant days when prospective buyers might be expected.

"Will, I found an attractive advertisement of a farm this morning," I said one exquisite evening late in March when the first green of the grass combined with a soft south wind to tell winter-weary inhabitants that spring would soon be there. "I just glanced at it hastily and saved it to read to all of you to-night. Listen! 'Attractive, fertile farm in the heart of one of the richest farming districts. Fine, airy, picturesque farm house with beautiful trees and shrubbery on lawn. Just the place for a summer home, or a money-maker for man interested in cows and chickens. Owner made $150 from eggs during cold weather. Fine pasture land, well watered; excellent fruit trees, well trimmed and fertilized; pike, school, church, free delivery, telephone line'—" The circular dropped from my hands as I glanced at the bottom of the page. "Why, this is our own farm!" I gasped. "It's Mr. Tanner's circular, and I never knew it. And it's all true!"

The whole family trooped out to look at the house over which the last rays of the sun slanted lovingly, and then at the pasture which had been cleaned and made twice as fertile by liberal applications of manure during the winter. Then we went back into the sunny, light, airy living-rooms and even the big fresh bedrooms above before a word was said. It was with regret that we made the rounds, and then I said: "Let's keep it ourselves. It would take a long search to find a farm so attractive in every way."

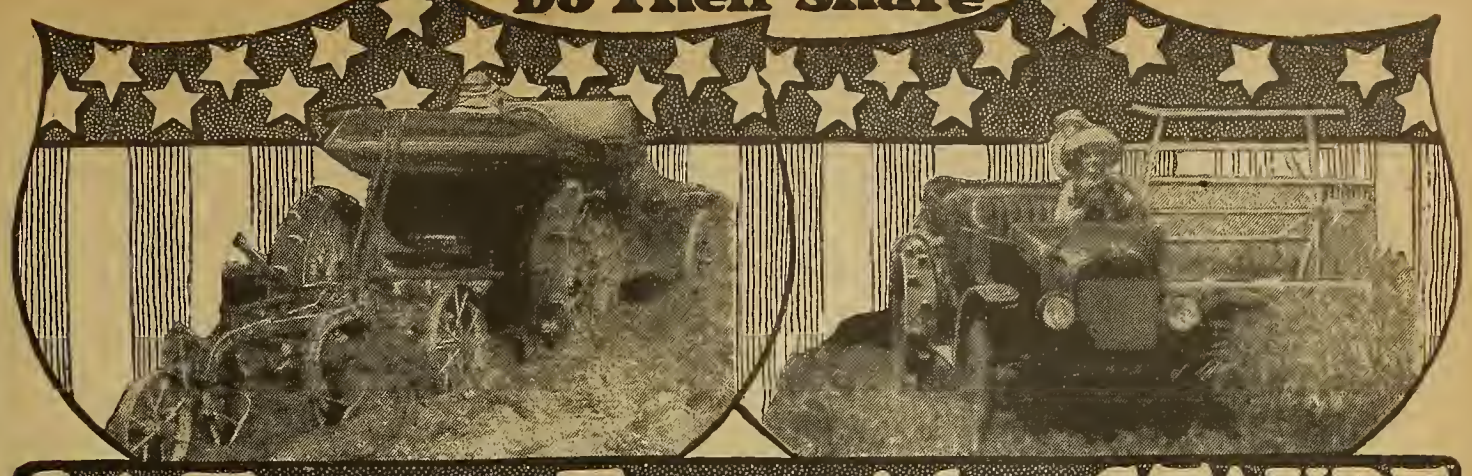
"Let's!" said my husband, though he had some difficulty with his throat before he could bring out the little word. "What do you say, children? Shall we move to the West or stay?"

"Stay!" cried the children with one voice, and that very day lame Mr. Tanner crossed off his circular one of his most attractive farm bargains. He told me afterward that he did it with a smile, for he knew that it was his efforts that had put us on the right track, and that was better than the greatest commission he could get for selling out our run-down farm which would be run down no longer.

Our June Number

A FEW of the interesting articles in the next issue are: The Great Experience—"Over There," by R. E. Morrison; Your To-morrow's Beefsteak, by Wirt Stephens; My Son—and the City, by Donald Morton; Uncle Sam, Railroader, by John Snure; A Farmer-Governed State, by M. G. Franklin; This Little Pig Went to Market, by H. H. Haynes; Hendricks Hobbies, by W. L. Nelson; Furnishing Your Home, by Elizabeth Anthony; and a double page of pictures entitled Hun Handiwork.

The Girls Can Do Their Share



It's Easy to Farm with a STAUDE

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9. Will it pull a 14-in., two-bottom gang plow?
10. Will it pull a 16-in., two-bottom gang plow?
11. Will it plow 100 or more acres?
12. Will it work in soft ground?
13. Is it good for discing?
14. Is it good for drilling?
15. Is it good for harrowing?
16. Is it good for disc plowing?
17. Is it good for listing?
18. Is it good for cutting grain?
19. Will it cut 100 or more acres of grain?
20. Is it good for mowing?
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22. Is it good for digging potatoes?
23. Will it pull a hay loader?
24. Will it pull manure spreader?
25. Will it drag and grade roads?
26. Will it pull stumps and trees?
27. Is it good for heavy hauling?
28. Is the Bolster attachment efficient?
29. Will the belt power attachment do good work?
30. Is it faster than 4 horses?
31. Can it do more than 4 horses?
32. Does it cost less than horses?
33. Will it replace horses?
34. Will it do all we claim?
35. Does it take much gasoline?
36. Will it run on kerosene?
37. Does it solve the help problem?
38. Can it be changed from car to tractor in 20 minutes?
39. Will it run day and night?
40. Can I use it on an old auto?
41. Has it lots of power?
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43. How often must radiator be filled?
44. Is the Fast Speed efficient?
45. Will it wear out front tires?
46. Is THE E. G. STAUDE MFG. CO. reliable?

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2. Will the Staude Harm My Engine or Car?

"My Staude does not injure the engine or other parts in any way."—H. J. HALLOCK, Ridgeway, Mo.

"There's no more wear on my Ford than there would be on the road the same length of time."—C. A. NELSON, Rowan, Ia.

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"Have no trouble with overheating."—D. G. HERRING, Princeton, N. J.

"As for ths engine heating I have had no trouble. Sometimes I run the Staude all day without putting in any extra water."—G. E. PROVINE, Macomb, Ill.

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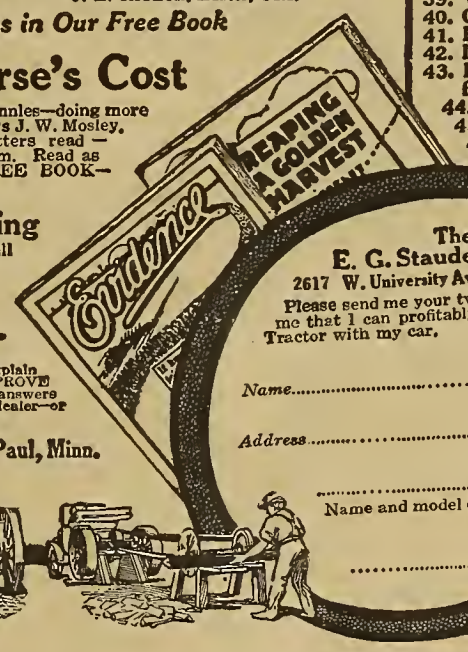

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Only a short time ago this young man, Walter Kaley of Pennsylvania, was working in a machine shop.

He was looking for bigger opportunities—for work with prospects for the future. He learned of the proposition which FARM AND FIRESIDE offered to its representatives.

He undertook the work—not without some uncertainties at first. He was soon so successful that he induced four of his brothers to join him. Since then several other young men came with him, forming a crew. None had any special training for the work—one was working in a sand quarry; another was driving a tea wagon, etc.

$50 weekly is now the lowest amount earned by any of these boys. In a short time they will exceed even this by a good wide margin.

If you want an extraordinary opportunity, if you really want to make more money, then fill out the coupon to-day.

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The Enemy

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LITTLE did the Kaiser think, when he started the war, that he would be using boys in his armies before it was finished. But such is the case. The German losses have been so great that it is now necessary to fill the gaps in the Hun ranks with boys in their teens. Here we see one of the new boy regiments marching through a Berlin street on its way to the western front.

Photograph by Central News Photo Service

THESE Huns are happy because they have just been captured by the British in Flanders. Their faces reveal their youth and undernutrition. Only three of these prisoners are full-grown men. The man with the blackened face was on patrol duty in No Man's Land when captured.

THE Kaiser and the crown prince are still fond of reviewing troops before a battle. Notice the self-decorated iron cross the Kaiser wears, and his withered left arm that he camouflages. The crown prince is a walking advertisement of German Kultur. See the skull and crossbones he wears on his helmet.

HOW are these sixteen- and seventeen-year-old German boys going to keep the Allies from winning the war? They aren't. And no one knows it better than they do. The Huns are so hard up for soldiers that boys are taken out of school, given a few months' training, and rushed to the front. These German youths, who were captured recently, are being questioned by a French officer.

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THE so-called Hun shock troops are selected and accoutered especially for assault work. The main feature of their equipment is the steel breast plate, which is strong enough to turn a bullet at 60 feet. This fellow was shocked to discover he was one of many prisoners taken by the British after a sharp fight at Boesinghe.

Photograph by Central News Photo Service

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ALTHOUGH Von Hindenburg and Ludendorff would have us believe all German troops have plenty to eat and to wear, a look at these Hun soldiers at play back of their lines in Flanders tells a different story. Nearly all of the Germans have hunger-pinched faces.

Photograph by Brown Brothers

GERMAN troopers fighting from shell holes before the barrage fire of the Allies. This photograph was taken from a captured German officer. A dispatch dog, quite unperturbed by the fire, is seen taking a message to reinforcements in the rear.

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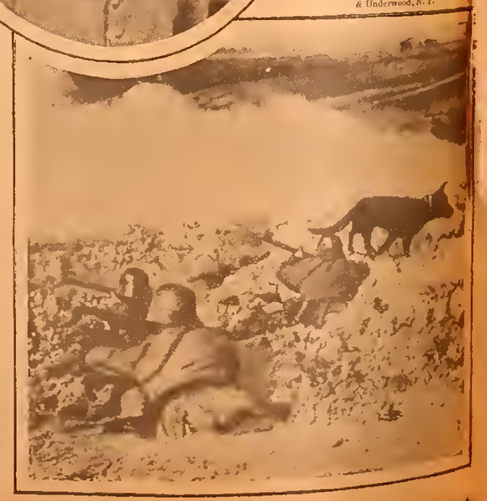

HERE is a German commander, his adjutant, and his staff who were captured recently. The commander is in the center of the group. We don't know whether it was worry or lack of sausages and beer that has made him so thin.

Photograph by Brown Brothers

THIS is a cage a few miles back of the allied lines where they keep the captive German soldiers until they are ready to take them to the permanent prison camps. Nearly all of these Huns have that tell-tale thin face. Three guesses: Why do they appear to be so pleased with their being captives? The Allies' best record so far is 200,000 German soldiers taken prisoner in one year.

Photograph by Central News Photo Service

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And there are 30,000 people in the East who know from experience how superlatively well the Colt does both.

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¶ Can you imagine the joy of a housewife, who is sick and tired of cleaning lamps from one year's end to another, at being able to turn on for the first time (without even requiring a match to light it), this brilliant, beautiful light?

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11

Live Stock

The Horse's Collar

By M. N. Harrison

WHEN fitting a horse with a collar, the animal should be standing in a natural position on level ground, with his head held at the height maintained while at work. The collar when buckled should fit snugly to the side of the neck, and its face should follow closely and be in even contact with the surface of the shoulders, from the top of the withers to the region of his throat. At the throat there should be enough room for a man's hand to be inserted inside the collar.

The style of horse collars are created mostly by the use of different materials in their construction. Such materials as heavy duck, ticking, and leather are used either alone or in various combinations.

All-metal collars may also be bought. The stuffing used in horse collars is coarse material, such as rye straw, curled hair, and cotton fiber.

The all-leather collar stuffed with seasoned rye straw, with a layer of curled hair in the facing, is a satisfactory kind. The cost is somewhat greater than on the collar made wholly of duck or ticking with cheaper stuffing, but the service given by this collar is usually so far ahead of the latter that the all-leather collar proves to be the cheapest in the end.

The collar selected should be examined carefully every time it is going to

"Coats off," for horse and man alike

be used. All dirt and sweat found on the face of the collar should be cleaned off and the surface which comes into actual contact with the neck and shoulder should always be smooth and hard.

In order to prevent galls and more serious conditions, it is not enough to give careful attention to the selection of the collar. The shoulder of the horse should always be washed and given special care when the animal is at heavy work. If the selection of the collar has been properly made and all of the other things in regard to this piece of harness looked after, the care of the animal's shoulder is a simple process.

Under these conditions washing the shoulder with soap and pure water, after the harness has been removed at the end of a day's work, and thoroughly drying the parts by rubbing them with clean cloths, is all that is necessary.

The colt that is being broken to work in the spring should be started in on light draft while the weather is still cool, so that his shoulders as well as the rest of his body may be toughened and put in good working condition before the hot summer weather.

Other common causes for diseased neck and shoulders on a horse where preventive measures should also be applied are implements with excessive tough weights or excessive movements in the tongue when the implement is being drawn, side draft of free-going animal hitched to a slow or lazy one, walking on a ridge or furrow that is too narrow, which may cause the animal to slip constantly or side-step, and in this way injure his shoulder. In addition to this the neck and shoulder are exposed to the usual mechanical or accidental injuries.

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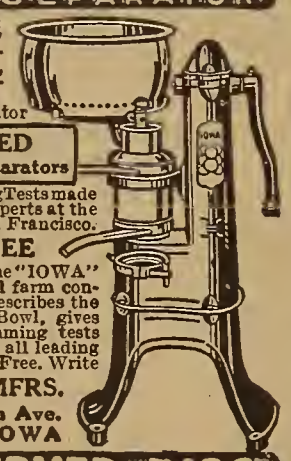

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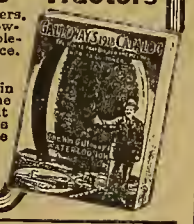

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FARM AND FIRESIDE

Springfield, Ohio

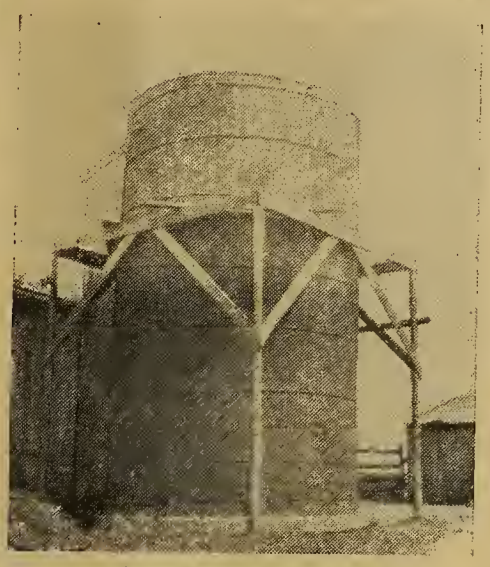
Dairying

Separator Losses

By J. B. Fitch

WITH high-priced butterfat and the small margin between cost of production and price received for butterfat, experienced dairymen do not need to be warned to watch for leaks in handling cream. There is, however, much butterfat lost in the skimmed milk during separation on some farms, due to carelessness and poor methods.

The old methods of creaming, such as the water dilution, shallow pan, and deep setting, are practically obsolete and



An original silo brace

have been replaced by the hand separator. Some farmers who are milking but a small number of cows are still using some of the above methods, but with only three or four cows a farmer can lose enough butterfat by these methods to pay for a separator.

In comparing the foregoing methods of creaming with the hand separator at the Indiana Experiment Station, some surprising results were obtained. The water-dilution method, where water was added to the milk to facilitate separation, caused a loss of 40 pounds of butter in a year in the milk from one cow producing 6,000 pounds of milk.

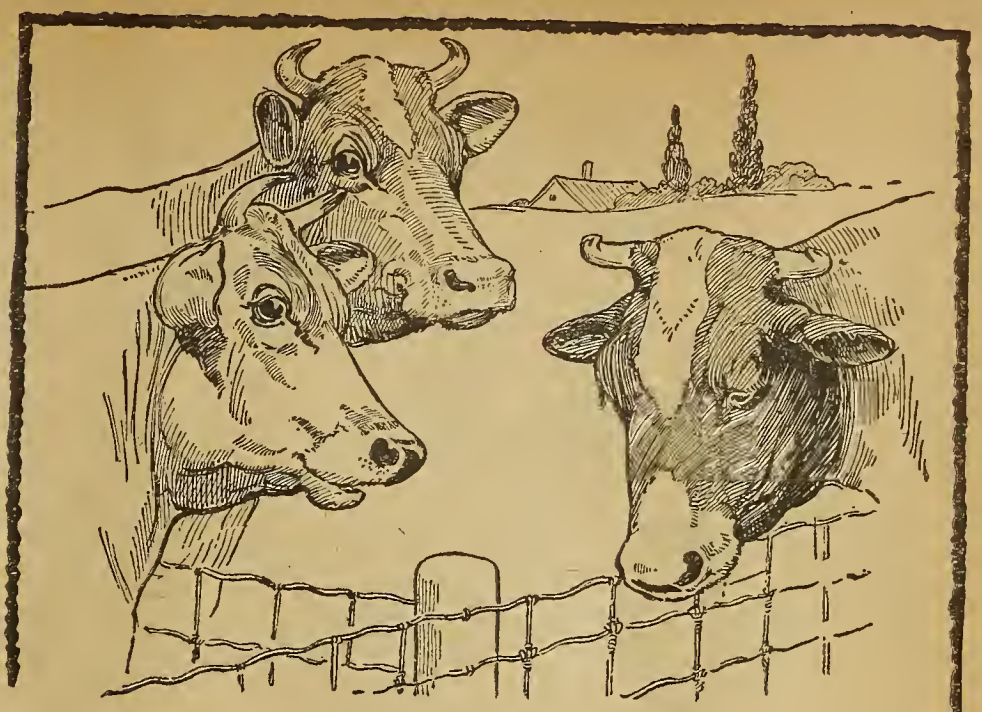
The shallow-pan method of skimming the cream from the top of crocks and pans of milk caused a loss of 26 pounds of butter from the same amount of milk. The deep-setting method, which consists of a deep, narrow can surrounded by cool water, caused the cream to separate quite well, but 10 pounds of butter was lost from the above amount of milk.

In separating the same amount of milk with a hand separator but 1.2 pounds of butter was lost. In addition

Good to the last bite

to the more efficient separation by the hand separator, the skimmed milk from this source was far superior in feeding value to that of the other methods used. It would not take a farmer milking three or four cows many years to pay for a separator from the loss of any of the above methods.

However, the efficiency and the lasting quality of a hand separator depend upon the care the machine receives. A dirty separator bowl not only affects the quality of cream produced, but also the skimming efficiency of the machine.



IF COWS COULD TALK

"Good morning, Mrs. Fawncoat. I hear that all the cows in the county are joining the 'Win-the-War' Club."

"Yes, Mrs. Starface; Secretary of Agriculture Houston says we must increase the production of butter-fat, and we cows have all promised to do our 'bit.' "

"There's one thing I want to say right now," spoke up Mrs. Black. "The farmers have got to back us up in this movement. I'm with the rest of you, heart and soul, but what chance have I got?"

"Why, Mrs. Black, what's the matter? You have a fine warm barn and plenty to eat and drink."

"Yes, I know; but what can I do as long as they use that old cream separator on the place? It never was any good, anyway, and now it wastes so much cream I'm just plain discouraged."

"Well, you're not so badly off as some cows, where they haven't any cream separator at all."

"I don't know about that. There's a lot of cream separators in this county that are only 'excuses'—not much better than none at all. I tell you, Mrs. Fawncoat, with butter at present prices and the people at Washington begging every one to save fat, it's almost a crime to waste butter-fat the way some of these farmers do."

"That's one thing I'm thankful for," said Mrs. Fawncoat, "there's no cream wasted on this farm. We have a De Laval Cream Separator and everybody knows that the De Laval is the closest skimming machine."

"Well," said Mrs. Starface, "we never used a De Laval on our place until last fall and supposed one separator was about as good as another; but, honest, the De Laval is the first cream separator we've ever had that gave us cows a square deal."

P. S.

Of course your cows can't talk—but if they could you'd never have a moment's peace until you got a De Laval Cream Separator.

Remember that a De Laval may be bought for cash, or on such liberal terms as to save its own cost. See the local De Laval agent, or if you don't know him, write to the nearest De Laval office as below.

THE DE LAVAL SEPARATOR CO.

165 Broadway, New York 29 E. Madison St., Chicago

THE FRONT THAT GAVE THE GRIFFIN SILO FAME

Continuous Open Door Front. Permanent steel ladder attached.

Size 8 x 20	$114.16
" 10 x 24	163.40
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Other sizes in proportion.

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HEAVES Money Back If It Fails

A horse with heaves can't do its full share of work. Cure the heaves and you have a horse worth its full value in work or in money. Send today for

FLEMING'S TONIC HEAVE POWDERS

($1.00 per package). Satisfactory results or money back. Fleming's Vest-Pocket Veterinary Adviser. Helps you distinguish heaves from other ailments. Write for the Adviser. It is FREE.

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ROSS Low Speed Light Running **SILO FILLERS** Larger Capacity Less Power

Our 68th Year

No Silo too High for The ROSS

Whatever your requirements are we have a size to suit, 4 H. P. and Larger.

We can show you The Ross will operate with Less Power and Less Speed and still produce Larger Capacity. Our selling plans make this possible.

No Limit to our Guarantee because there is No Limit to the ability of The Ross. Write your own guarantee if you please.

Buy now, Cost you Less. You can have the machine any time without Cash investment in full prior to Silo Filling Time.

THE E. W. ROSS CO., Box 119, Springfield, Ohio. 68 Years' Experience

Machinery and Repairs carried at convenient points

You May Stay at Home—But You Can Help Win the War

YOU—"*The Man with the Plow*"—may look far afield, your thoughts may be of the boys in the trenches, you may even feel a strange tugging at the elbow, but your task now is to plow and plant and produce. *Your* fight is in the "supporting line." And from that line must come the strength of the

AMERICAN ✚ RED CROSS

—The great organization of mercy, whose activities know no bound in territory, no limit in service

The atrocities of our enemies have made war's suffering doubly great, but that suffering is being relieved by the Red Cross. In Belgium, in France, in Serbia, in Armenia—wherever war has spread its misery, the Red Cross is at work, nursing the sick and wounded, feeding and clothing the destitute, rebuilding devastated lands—even preparing crippled soldiers for new lives of greatest usefulness and independence. And for this great work your money is needed.

Your Red Cross is an All American, largely volunteer, organization, authorized by Congress, headed by President Wilson, audited by the War Department, enthusiastically approved by your Army, your Navy and your Allies.

The work covers both military and civilian relief in every war-torn Allied country and full reports of all expenditures are continually being published, or are available through the Chapters.

Every cent of every dollar received for the Red Cross War Fund is spent for war relief. All administration costs and relief work for other than war purposes (such as the Halifax and Guatemala disasters) are taken care of out of membership dues, and the interest which accrues from the banking of the War Fund has made actually available for war relief at least one dollar and two cents for every dollar contributed.

Contributed through Division of Advertising — *United States Gov't Comm on Public Information*

This space contributed for the Winning of the War by

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Firestone Park, Akron, Ohio

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Are you in a treadmill? Are you in a rut where you cannot increase your income? Why not climb out of the rut? You can make from $35 to $60 weekly acting as a representative for FARM AND FIRESIDE.

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FARM AND FIRESIDE, Agents' Department, SPRINGFIELD, OHIO

Automobiles

Care of the Motorcycle

By Wm. E. Curley

MY EXCUSE for presuming to offer a little advice on the care of the motorcycle is that I have ridden and cared for four of them since 1909. My first was of the vintage of 1908. You remember the type, no magneto—every time you got caught out in the rain a short circuit would occur and the machine would refuse to run—and no clutch. In order to start, it was necessary to pedal the thing until the engine was turning fast enough to start. It was lucky for us that in those days the traffic officer had not come into existence, for it would be a physical impossibility to observe the present traffic laws if mounted on one of the old type of machines.

Now I am going to tell about a few points. After your first rear tire wears out, replace it with an oversize tire; if possible, a regular automobile tire. It pays in satisfaction, but most of all in money, to do this. I have a friend who replaced his worn-out rear tire with a 29x3½-inch rough-tread automobile tire that he never wore out.

And keep the tires hard. I realize this is very old advice, but it is just as good as it ever was. In my earlier days of motorcycling, before spring saddle posts or spring frames were dreamed of, there was an excuse for keeping tires soft. A rider would have been shaken to pieces with hard tires. So in those days nearly all tires were discarded on account of rim-cut long before the tread was worn through. But now, with the motorcycle in the same class as a high-grade automobile, as far as riding qualities are concerned, keep the tires well inflated.

It took me years to learn that the manufacturer usually knows what he is talking about when he recommends a certain brand or grade of cylinder oil. I experimented with all sorts of cheap, doubtful oils. But when I bought my fourth machine I decided to give the high-priced oil recommended by the manufacturer a try-out, and I never went back to the low-priced oils.

To Clean the Crank Case

Use a good oil, flush out the crank case with coal oil every thousand miles, and you will be well repaid. Flush out the crank case as follows: On bringing in the motor after a ride, while the engine is still hot, drain the oil from the crank case. After the oil is all out close the stop cock again. Remove the plugs from the cylinder heads, turn over the engine until both pistons are down, and fill up both cylinders with coal oil.

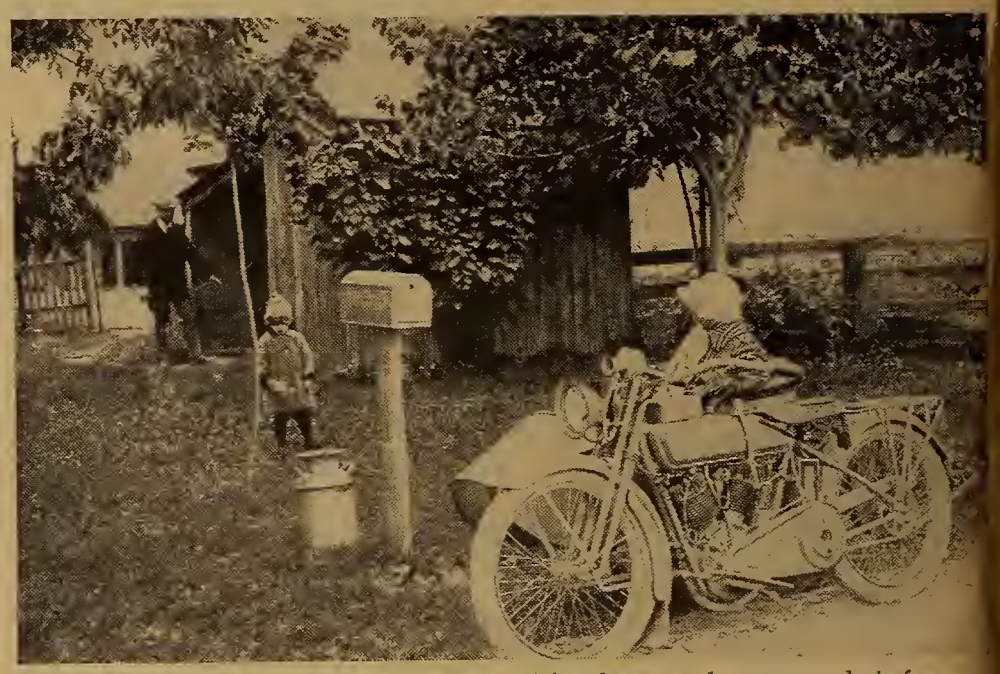
By the next morning the oil will have worked down between the cylinder walls and the pistons, thoroughly cleaning both. Rinse out the inside of the crank case by turning over the motor. Do this by hand; never run the engine with only coal oil as a lubricant. I did once, to my sorrow, for the crank shaft seized in its bushing and I was compelled to take the engine entirely apart to release it.

I always considered carbon as one of my worse trials. My riding was such that it required at times pretty much all the reserve power of my machine. There was one steep, rough hill I traveled every day that required good handling to run on high gear. About once a month I could feel the motor get sluggish and develop a knock. Finally it would be necessary to shift to low gear to get to the top. That was always my signal to scrape carbon and grind the valves a little. And what a change removing a little carbon does make! It transforms a sluggish, knocking motor into a thing of eager life.

Removing the Carbon

Scraping carbon is not a pleasant job, so I hopefully tried out each new scheme for removing carbon. But I have yet to find anything that will approximate the results obtained by removing the cylinder and chipping out the accumulation of carbon with a screw driver.

As the valves lift only one-fourth inch, a close adjustment of the valve lifts is necessary. When the valve is seated, there should be enough play between the valve stem and valve lift to slip a heavy piece of paper between. If there is too much play the valve will not open to its full capacity, while on the other hand too little play will keep the valve from seating properly.



Used for errands, quick trips to town, and for pleasure, the motorcycle is fast becoming a necessity

Profitable Joy-Rides

I BELIEVE that the family automobile can do quite a little this summer in helping decrease the price of food in the city and at the same time turn an extra dollar or two for the farmer. Last year grapes, apples, and several other products that would have been wasted on our farm found their way to the city markets because the trip could be made in a few hours in the automobile, where it would have taken the best part of a day with a team.

Besides, there was seldom enough at one time to fill a wagon, and as the things were perishable they could not be saved until a load was gathered. But as we had to go to the city anyway for various necessities, we aimed to have a small amount of produce on hand, and when sold this paid for our gasoline, our shopping, and sometimes a little over.

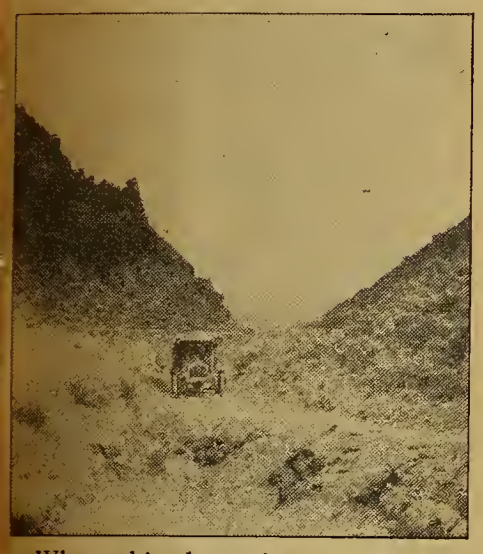
It didn't occupy any more room than the things we brought back, as it was fresh, and sold readily. So we had the apparently impossible—a profitable joy-ride. If all farmers would utilize their machines in this way it would perhaps help to clean up the farm surplus at a profit. The automobile has ceased to be regarded as a luxury, and its use can be extended to cover many of the little trips that are still left to the slower horse-drawn vehicle.

Extra "Gas" and Oil

By B. D. Stockwell

A READER who is contemplating a long trip by motor in the West says that the gas tank of his car holds only 10 gallons, and asks whether it would be well to provide for additional gasoline storage.

Filling stations are so well distributed over the country that anyone who travels the regular automobile routes will have no difficulty as far as gasoline is concerned. Merely as a precaution



When taking long trips over strange roads carry extra oil in reserve

carry an extra gallon in a can as reserve supply. But the matter of oil is somewhat different.

It is bad policy to mix various kinds of oil in your crank case, which you will frequently be obliged to do when buying a quart or so at a time as you go along. Carry a two-gallon can filled with the oil you have found most satisfactory. Use out of this can and replenish the supply with the same kind of oil when you can find it.

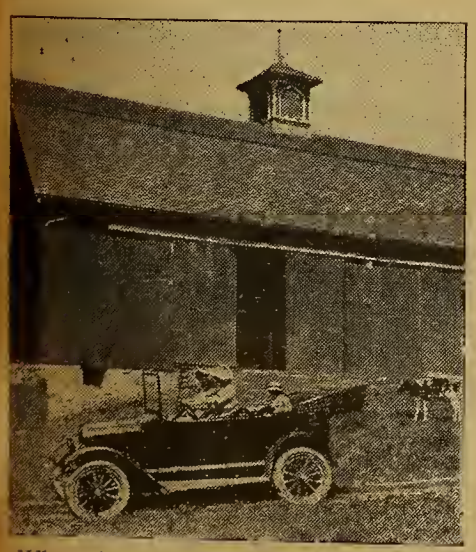
Handle Top with Care

By W. B. Collins

"CAN anything be done with an old top which leaks in rainy weather?" asks an Ohio reader, who adds that the top is rather old and somewhat ragged in appearance.

Such a top can be patched, and with some care it will perhaps last the rest of the season, but the best thing to do is to get a new one.

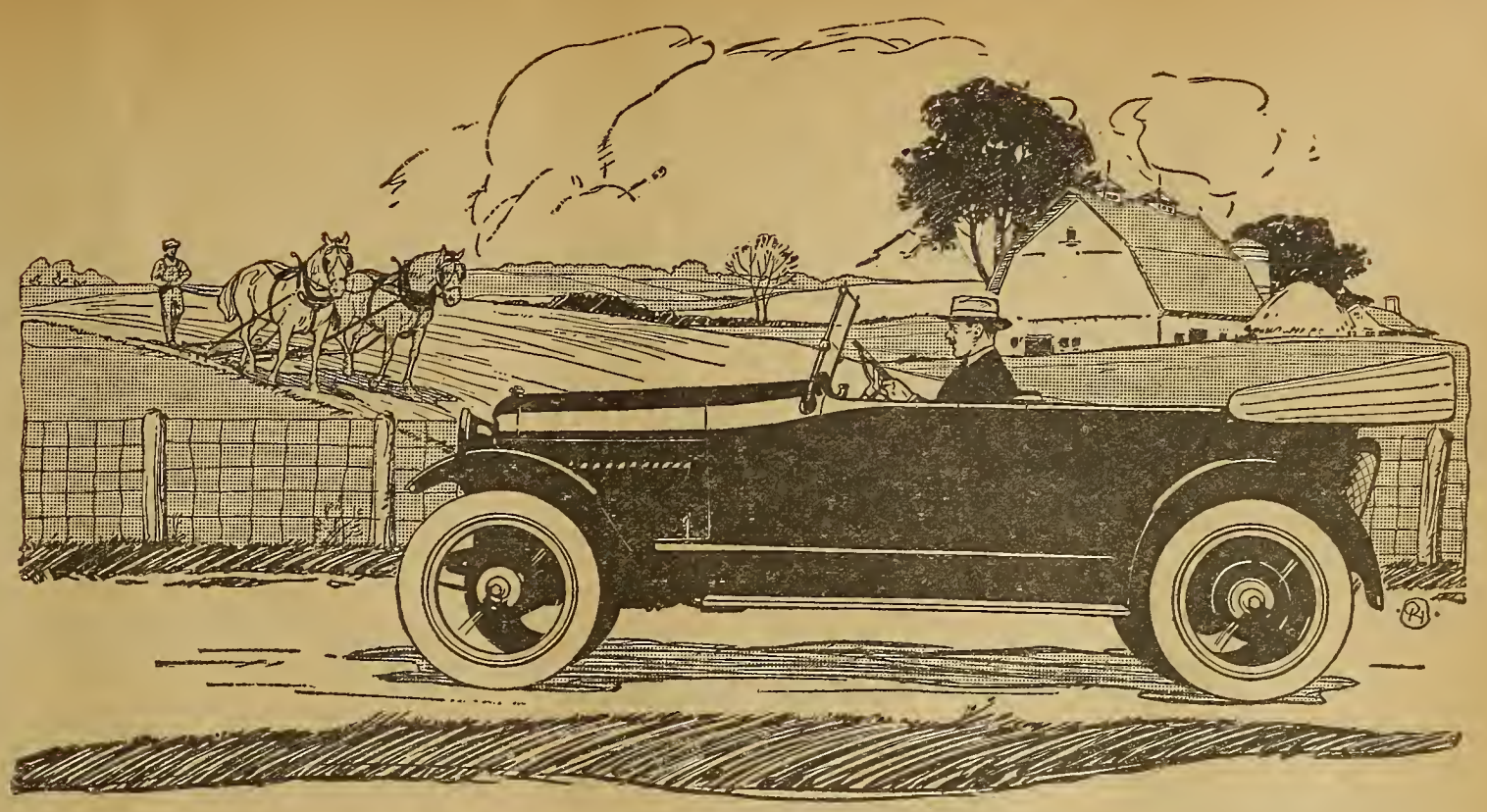
Since the top is a conspicuous part of a car, a few suggestions concerning its upkeep may be helpful. If you wish the top to look well and give long service, handle it as little as possible. Either keep it up or keep it down most of the time, preferably the former. But if it is down and a storm threatens, don't



When the top is down keep it protected from dust by means of a top cover

wait until the storm breaks before raising the top. When putting the top down, fold each section between the bows carefully. It is the wrinkles and ridges that cause cracks later on. Hasty handling means breaks and tears.

A car owner of my acquaintance has never had the top of his touring car down in the two years he has had it, and it looks practically new. Careful driving to avoid overhanging branches, which are common on narrow roads, is another help in keeping the top in good condition.



PAIGE

The Most Beautiful Car in America.

Time Is Money

How much time do you waste in "hitching up" when you drive to town in the buggy? How long does it take you to get there—and back? What is your time actually worth in dollars and cents?

If you answer these questions correctly, you are bound to arrive at two very startling conclusions. First, you can't *afford* to get along without a motor car. Second, you are paying for a car *now*—whether you own it or not.

Time, please remember, is money. A productive hour is worth just so many bushels of wheat, so many barrels of flour, so many loaves of bread. A wasted hour is worth precisely nothing.

Because this is true, you can't afford to use your horses for a task that the motor car will perform ten times more efficiently.

Because this is true, you can't afford to lose the profits that would *pay* for a car—and show a handsome surplus to boot.

You actually need a car; there can be no question about that. But you also need a *good* car—a reliable car—a comfortable car.

In the opinion of ourselves and more than 50,000 satisfied owners, you need just such a car as the Paige.

PAIGE-DETROIT MOTOR CAR COMPANY, 238 McKINSTRY AVENUE, DETROIT

Are You Getting Somewhere?

Does the month of May find you farther ahead than you were six months ago? Be honest with yourself: Are you getting somewhere—or is it the same old grind?

Here are six young men—all from the same Pennsylvania town, who, like you perhaps, were not always earning an average of $50 a week. They did not always have the same extraordinary future to look forward to. Only a few months ago one of them, Frank Bennett, was working in a sand quarry for small wages. Another, William Woodruff, was driving a tea wagon.

It happens that one of the boys, Walter Kaley, inquired of FARM AND FIRESIDE for a proposition to act as representative. He was then working in a machine shop. He undertook the work, and was so amazed at his success that he induced the other five to join him. None of them now earns less than $50 weekly.

We can offer you a proposition that will afford the same extraordinary opportunity. If you really want to earn more money, then fill out the coupon to-day.

CLIP THE COUPON

Farm and Fireside, Agents' Dept.
Springfield, Ohio

DEAR SIRS:
Please tell me how I can earn $50 weekly.

Name .....Street or R. F. D.....

Town .....State.....

A Member of the Prest-O-Lite Clan

THE members of this happy clan hardly know a battery "grid" from a piece of cheese. They don't know and don't want to know about the functions of "electrodes" or "electrolyte."

They are tickled to death to leave all that engineering "dope" to their battery-bug-friends, and the expert who runs the Prest-O-Lite Service Station down the street.

What they do know is that the little box of power, labelled "Prest-O-Lite" is an all-the-year-'round, one hundred per cent performer in wet, dry, hot and twenty-below-zero weather;

—that it carries in storage the necessary surplus power to feed the electric head-lights and spin the stiffest engine under conditions that would have forced any other man's battery to lay down on the job.

They know that the Prest-O-Lite Service expert is the proper party to pass on the condition of the battery and from time to time apply the simple treatments necessary to keep it up to its rated capacity.

They know that this service man's station is just down the street. That it's an easy matter to stop the car at his place for a few minutes once a month;

And—they know that the said Prest-O-Lite service man is a human being—a deserving battery engineer who in accordance with our well known policy makes no charge for "inspection" or distilled water—but has his fixed rates for all other services rendered.

If you can say "Amen" to this solution of all your car battery problems you are eligible to membership in the Prest-O-Lite Clan.

Drop us a line today and we will put you in touch with our nearest service station man, who will be on the lookout for your first call and will treat you as we want a life time customer treated.

The Presto-O-Lite Company, Inc.
Indianapolis, Indiana

The Oldest Service to Automobile Owners in America

Your Farm Buildings will be adequately protected from fire, wind, lightning and storms—and will be strong and durable if covered with our

Apollo
Highest quality— Sold by weight
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Through the use of Apollo Products you may have farm buildings that are neat, easy to construct and low in cost. Formed in standard patterns from APOLLO Best Bloom and APOLLO-KEYSTONE Copper Steel Galvanized Sheets—the most durable, rust-resistant galvanized sheets manufactured for Roofing, Siding, Culverts, Tanks, Silos, and all forms of exposed sheet metal work. Look for the Keystone added below the regular Apollo trade-mark. Send for free "Better Buildings" booklet.

American Sheet and Tin Plate Company
GENERAL OFFICES, Frick Building, PITTSBURGH, PA.

What's a Dairyman's Future?

[CONTINUED FROM PAGE 8]

repeatedly assured all producers of milk and dairy products—as well as handlers of certain other perishables—that no restrictions have been placed on such food materials, or are likely to be.

One expert, expressing merely his own opinion, went as far as this: "We must not get in the habit of talking too much about the price the consumer pays for his milk. If we can convince him that milk at 14 cents a quart is as cheap as beefsteak, for instance, on the basis of food value, what are we going to tell him if milk should go to 16 or even 18 cents a quart and beefsteak stays where it is now?

"Milk is an indispensable food regardless of what it costs, and the retail price must be high enough to encourage its production. I should not be surprised to see milk reach 20 cents a quart retail."

The latest official statement on milk, issued early in March, was published jointly by the U. S. Department of Agriculture and the Food Administration. It says in part: "Buy more milk and less meat and your family will be better fed. . . . Save on other things if you must, but not on milk."

Ship Shortage Cuts Exports

So you can see that even with the heavy foreign demand for dairy products there is not the slightest ground for fearing a campaign to check the use of milk. The only cloud on the dairy horizon is the shortage of ships with which to supply the Allies with butter, cheese, and condensed milk—our principal dairy exports.

For the three and one-half years from July 1, 1914, to January 1, 1918, here are the amounts that Uncle Sam has sent the nations fighting against the Hun: Butter, 28,998,891 pounds; cheese, 103,465,426 pounds; condensed milk, 126,356,679 pounds.

We must remember that these are highly concentrated products, and are equivalent to considerably over one and one-half billion pounds of whole milk. This is also only the amount exported to the Allies. The total to all nations runs into such dizzy figures that we had best merely draw the conclusion that American-made dairy products are now relished by countless people in all nations of the world.

With the completion of our ship-building program, dairymen of the United States will have practically an unlimited export outlet in addition to a normal home market until the warring nations again build up their depleted dairy herds. While the ships are being built, the dairyman's worst enemy is the U-boat, which he can fight most effectively by buying Liberty Bonds and War Savings Stamps.

More Corn from Fewer Acres

[CONTINUED FROM PAGE 6]

weeds are better than more. The first should be deep enough to plow down all weeds, and the other two more shallow. They are for the purpose of killing sprouting weeds and of forming a dust mulch to prevent evaporation of moisture.

After these three tillings, if the corn has been planted in a well prepared seed bed, the roots will have so ramified out and entwined between the rows that they will catch all the moisture as it rises to the surface, and very little will have a chance to escape. The farmer who gives his field three good tillings by the fourth of July need have no fears that it will suffer if it receives no further attention during the rest of the summer.

These five cardinal principles—the use of carefully tested seed, a well-prepared seed bed, delay of planting until danger of cold weather is past, the application of plenty of the right kind of fertilizer, and three thorough tillings—will insure us and our allies a bumper corn crop for 1918.

It will require headwork on the part of the farmer, but he is just as capable of it as any other class of men and, moreover, he is just as patriotic, and can be depended on to rise to this emergency and do his level best to meet his share of the work as demanded by Uncle Sam.

Tires $500 Apiece!

TIRES are selling at fabulous figures in Europe. War conditions may make them go almost as high here. You owe it to the country and to yourself to make your present set give the greatest possible mileage.

HASSLER PATENTED **Shock Absorber** For Ford Cars

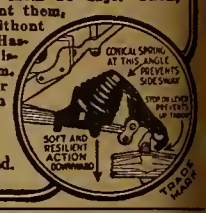
Hassler Shock Absorbers save tires because they support the weight of the car. When the car strikes a rut, they gently compress and absorb the jolt instead of forcing the tires to lift the car. The increased mileage from one set of casings pays for them.

Hassler Shock Absorbers make your Ford ride as easily as a $2,000 limousine. They save gasoline, reduce up-keep cost one-third, and increase the resale value of your car. 300,000 Ford Owners recognize their economic necessity.

10-DAY FREE TRIAL OFFER

Write today for **Free Trial Blank** and we will have a set of Hasslers put on your Ford without a cent of expense to you. Try them 10 days. Then, if you are willing to do without them, they will be taken off without charge. Don't ride without Hasslers simply because someone discourages you from trying them. Accept this offer and see for yourself. Over 300,000 sets in use. Write today—NOW.

ROBERT H. HASSLER, Inc.
403 Naomi St., Indianapolis, Ind.



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Buy direct and save $10 to $20 on a bicycle. **RANGER BICYCLES** now come in 44 styles, colors and sizes. Greatly improved; prices reduced. Other reliable models $16.75 up. **WE DELIVER FREE** to you *on approval* and *30 days trial* and riding test.

Our **big FREE catalog** shows everything new in bicycles and sundries. Write for it.

TIRES, lamps, wheels, parts and supplies at *half usual prices.*

Do not buy a bicycle, tires, or sundries until you get our *wonderful new offers,* low prices and liberal terms. A postal brings everything.

MEAD CYCLE COMPANY Dept. G-83, Chicago

Get Cash For Your Empty Bags

Don't throw away a single bag—they're worth money to you. Prices are way up now. Cash in on all you have. But be sure you get our prices before you sell a single one. We guarantee most liberal grading. Over 20 years in business is your assurance of a square deal every time. We buy any quantity. Freight paid on all shipments to Werthan. Find out what real satisfaction is. Write quick, stating what you have. Address

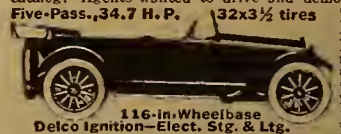
WERTHAN BAG CO.
68 Dock St. St. Louis, Mo.

WERTHAN PAYS HIGHEST PRICES FOR EMPTY BAGS

Shipped on Approval

Write at once for particulars of shipments and my 48-page catalog. Agents wanted to drive and demonstrate the Bush Car. Opportunity to pay for it out of your commissions. Agents making money. Shipments are prompt. Bush cars guaranteed or money back. 1918 models ready. Addr. J. H. Bush, Pres. Dept. E-12

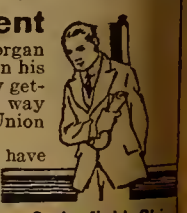
Five-Pass., 34.7 H.P. 32x3½ tires



116-in. Wheelbase
Delco Ignition—Elect. Stg. & Ltg.

BUSH MOTOR COMPANY, Bush Temple, Chicago, Illinois

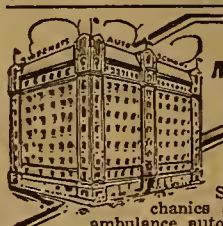
He Was a Student



Here is a young man, Morgan Williams, who earned $2,000 in his spare time during two years by getting subscriptions. In this way he paid for his education at Union College, New York.

You can do as well. If you have spare time, use it. Do you want MORE MONEY? If so, send us your name and address.

Farm and Fireside, Agents' Dept., Springfield, Ohio



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EARN $100 to $300 PER MONTH

Skilled auto and tractor mechanics are needed everywhere; as ambulance, auto and truck drivers; in Army service in the Aviation Department as fliers and mechanics; on our farms running tractors—thousands of positions open and waiting. This is a mechanical age—be one. Write today for

Big Free Catalog of the Sweeney Auto and Tractor School—the greatest in the world. You learn everything there is to know about driving and repairing every kind of machine by actual experience. You do all this work yourself under best instruction. You are practical and qualified to fill any high salaried position. Thousands of my graduates now making big money. Write now for catalog—a postal card will bring it. E. J. SWEENEY, Pres.,

SWEENEY AUTO AND TRACTOR SCHOOL,
531 Union Station Plaza
KANSAS CITY, MO.

Poultry

Hooverizing Our Chicks

By R. G. Kirby

IN FEEDING young chicks this year the profit will largely depend upon the skill in keeping down the feed bills without stunting the chicks. Last year we did without wheat, and while the chicks were not quite as good as the preceding year, when they had wheat, the difference was very slight. This year wheat is again lacking, and we are trying to make up for it by careful management with the use of other feeds.

With sour milk plentiful, our young chicks are making good use of it. We find the small sanitary fountains desirable for feeding sour milk.

For our earliest hatches, clover chaff furnished green food for the chicks without expense, gathered from the barn floor in front of the mangers. Chopped onion braces up the chicks on a raw, rainy day, when they are in need of stimulation. Bran placed in small hoppers keeps our chicks busy part of the day, but oats are the ration's foundation. Dry rolled oats are a fine feed to start young chicks, and even after we begin

Prize-winning White Hollands

the feeding of scratch feed we find a few rolled oats added to the hard grain mixture adds value to the ration.

We feed some sprouted oats regularly to the early hatches, and when they are six or eight weeks old they eat a few boiled oats with relish and advantage.

If hard grain is fed, without an effort to reduce the cost of feeding by the liberal use of sour milk, green feed, and dry mash, there will be disappointment in the amount of profit realized.

Save the Cheaper Eggs

By Jane Macpherson

THERE are many methods of preserving eggs for winter use, such as packing in bran or salt or covering with lime, but the water-glass method continues the favorite.

April, May, and June are the months when the most eggs are preserved for use when they will be both high and scarce next winter.

Water glass is known chemically as sodium silicate, and can be obtained at any drug store or mail-order house. Nothing but strictly fresh eggs without cracks should be stored in a stone jar, wooden or galvanized vessel, and covered with a 10 per cent solution of water glass.

The containing vessel should be stored in a cool place, preferably where the temperature does not rise above 55 to 60 degrees. The vessel should be covered to exclude dirt. The only attention required is that water be added occasionally, as the solution evaporates.

The preserved eggs do not absorb any undesirable flavors from the solution, and are excellent for all cooking purposes and for baking or boiling.

If the eggs are to be boiled the shell should be pierced with a needle to prevent cracking. It will make little difference in the keeping quality of the eggs whether they are fertile or not, if they are put in the solution the day they are laid.

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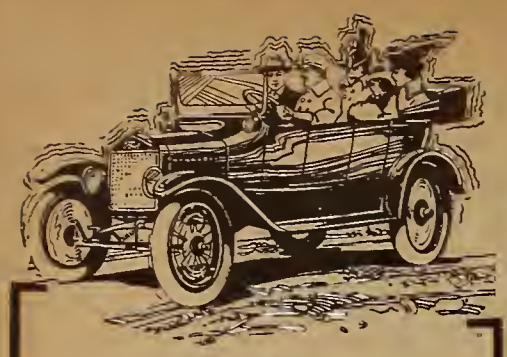

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STATEMENT of the ownership, management, circulation, etc., required by the act of Congress of August 24, 1912, of Farm and Fireside, published monthly at Springfield, Ohio, for April 1, 1918. State of New York, County of New York.—ss.: Before me, a notary public in and for the State and county aforesaid, personally appeared Walter H. Brown, who, having been duly sworn according to law, deposes and says that he is the Assistant General Manager of The Crowell Publishing Company and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit: 1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, The Crowell Publishing Company, Springfield, Ohio; Editor, Harry M. Ziegler, Springfield, Ohio; General Manager, George D. Buckley, 381 Fourth Avenue, New York, N. Y. 2. That the owners are: (Give names and addresses of individual owners, or, if a corporation, give its name and the names and addresses of stockholders owning or holding 1 per cent or more of the total amount of stock.) American Lithographic Co., New York, N. Y.; Wm. P. Bonbright & Co., New York, N. Y.; Denny Pomroy & Co., New York, N. Y.; Louis Ettlinger, New York, N. Y.; Ella Gardner Hazen, New York, N. Y.; George H. Hazen, New York, N. Y.; Joseph P. Knapp, New York, N. Y.; Florence Lamont, New York, N. Y.; Arthur H. Lockett, New York, N. Y.; Antoinette K. Milliken, New York, N. Y.; John S. Phillips, New York, N. Y.; Pomroy Bros., New York, N. Y.; Ida M. Tarbell, New York, N. Y.; J. Walter Thompson, New York, N. Y.; Irvin Untermyer, New York, N. Y.; Alvin Untermyer, New York, N. Y.; Alvin and Irvin Untermyer, Trustees for Irene Meyers Richter, New York, N. Y.; Wm. Watt, New York, N. Y. 3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None. 4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him. 5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is —— (This information is required from daily publications only.) The Crowell Publishing Company, Walter H. Brown, Assistant General Manager. Sworn to and subscribed before me this 16th day of March, 1918. [Seal] Mary B. Lamhkin. (My commission expires March 30, 1919.)

NOTE.—This statement must be made in duplicate and both copies delivered by the publisher to the postmaster, who shall send one copy to the Third Assistant Postmaster General (Division of Classification), Washington, D. C., and retain the other in the files of the post office. The publisher must publish a copy of this statement in the second issue printed next after its filing.

Swapping Germans for Canadians

[CONTINUED FROM PAGE 5]

the kindest. It was the German way of trying to make us forget the past. Neutral reporters were shown through here to impress on them the kind treatment Germany gives prisoners. Neutral reporters are never allowed in the real prison camps.

I met a number of old friends in the Glass House. Seventy-five, all told, were sent here to be examined. We waited two days for the examination to begin. No one was told if he had passed or not. It was finished in four hours. If a prisoner passes that German board of examiners—a colonel, a major, and a surgeon-general—he certainly is incapacitated.

After dinner an orderly read the names of the prisoners who would not be exchanged. We all stood or sat in fear and trembling, for those whose names were called would be forced to return to the prison camps and stand further German punishment. We shook hands, and said good-by to those who had to return to the camps. We all felt like crying. The majority of the rejected had been confident that they were going home because they were told when they left the hospital that they would go right through to England.

Huns Try to Remedy Work

I was surprised and delighted when my name did not appear on that roll. I had not built any castles. I was familiar with the method, and knew what to expect. Now I was certain of getting through. I knew that there was another list coming—those who would be returned to Germany for further treatment. They are the cases of which the German surgeons have made such a mess that they will not permit them to leave until they have tried to remedy their work. The few on this list were terribly disappointed.

That night there was great rejoicing. We used up the balance of our parcels, as we had no further use for them. Everyone was so excited that sleep was impossible. The same was true the next day. The hours seemed weeks. At last four o'clock came. We were loaded into automobiles and taken to the station. We had to undergo the usual German count and examination, which was more than exasperating. We went in groups of ten. The train was composed of Red Cross hospital cars with plenty of nurses and doctors. What a difference! We were not in need of nurses now. In the past, when we needed them, there had been no nurses. Of course, we would be going through a neutral country, and the Germans did it for effect.

Cross Holland Frontier

Our train crossed the Holland frontier at ten o'clock the next morning. The Germans again examined our things before they left the train, and the Dutch took their places. We noted the difference immediately. No starved and sober people, no empty fields, women and children and men everywhere. The people were fat and cheerful, everyone had a smile and a cheer for us. The fields were filled with fat, sleek cattle. Plentiful crops were on every side.

At Rosendaal the train stopped for an hour. The people of the town gave us a welcome. And what a welcome it was! Not only cheering and handshakes, but a material welcome as well. They had everything to satisfy our appetites. They knew what we had gone through, and had prepared accordingly. The favorite food of all was white Dutch rolls spread with Dutch butter, and a large slice of Dutch cheese. We ate so much it was a wonder that we did not make ourselves sick. It was impossible to refuse anything, as they wouldn't take no for an answer.

The British Red Cross had sent two representatives to look after us. When one of these women entered our car and said, "Welcome home, boys," we couldn't believe our ears. Her soft, well-modulated voice sounded sweeter to us than the richest tones of the greatest singer. She wanted to pass on to the next car, but we refused to let her go. We wanted her to stay with us all day. We had not seen or spoken to an Englishwoman for

Which *Do* You Want, Uncle Sam—

Big powerful patriotic national circulations to hold the people together—or little sectional ones to keep them apart?

FARM AND FIRESIDE is made for a big circulation—not for a small one. The present issue—the May number—goes to between 600,000 and 700,000 subscribers and news-stand buyers—twice as many as bought the magazine a few years ago. In other words, by keeping up the quality and keeping down the price we are able to make a magazine for the many rather than the few.

Yet Congress has passed a law to go into effect next July which is intended to curb big circulations rather than to encourage them. It is a zone postal bill which provides for increases in second-class postage of from 50 to 900 per cent—according to the distance you live from our publication office. The farther away from us you live the more we shall have to charge you for your magazine.

And this in spite of the fact that the Post Office Department is making money on its operations. What, then, is the sense of putting a law on the books the effect of which is to suppress rather than develop the national circulation of profitable reading? Go through this issue of FARM AND FIRESIDE and see whether you think one part of the population ought to pay more for it than some other part. Doesn't it belong to all at the same price?

FARM AND FIRESIDE does not want to increase its price. It could probably make just as much profit for itself out of a smaller circulation at a higher price as it can out of a bigger circulation at a lower price. But the idea of a smaller circulation is contrary to the whole spirit of the publication.

Uncle Sam has got himself mixed on this proposition. In one breath he passes a law to drive folks away from the magazine, and in the next he comes to our editor and says: "You have a tremendous circulation, please help us get the truth before the nation." So the Department of Agriculture asks the editor to help increase the production of foodstuffs—and the editor does. The Liberty Loan people write to the editor and ask him to help sell their bonds—and he does. The food administrator asks the editor to help get the truth about food to the people—and the editor does. The fuel administrator asks the editor to help educate the people about coal—and the editor does. And the War Savings Stamp people ask the editor to speak up for them—and the editor does.

Uncle Sam wants the editor to help him, and the editor is proud of the chance to do it. But just as he goes at the job Uncle Sam makes a move to curb the very power he himself has invoked. It is a case of asking the goose to lay a golden egg and then disturbing the goose just as it settles down to work.

Which *do* you want, Uncle Sam—big powerful patriotic national circulations to hold the people together, or little sectional ones to keep them apart?

Now, Mr., Mrs., and Miss Subscriber, you can do something practical to change this bad law, a law that was passed in a hurry by a tired-out Congress last fall. You can write to your Congressman and Senators at Washington and ask them to repeal it. *Do so to-day*—unless you think you will enjoy the sensation of paying more for your magazines than people will have to pay who live within a few miles of our publication office, which is located at Springfield, Ohio. The farther you are away from Springfield the louder you should cry, because the more you will have to pay.

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THE AMERICAN MAGAZINE — EVERY WEEK

many months, and now we were just hungry to see and hear one.

At Rotterdam, nearly the entire population turned out to welcome us. We arrived at the Hook of Holland at three o'clock. Another banquet awaited us. The British ambassador and his wife and members of all the different embassies were there to welcome us.

The steamer arrived from England about four. The Germans who were being exchanged for us were immediately unloaded and taken to their train. There was no reception for them, other than a cup of coffee and sandwiches. At one time the English and German prisoners were kept in one room, but the sight of the sleek, well-fed, well-clothed Germans was too much for the ragged and starved English. There was a free-for-all fist fight in which the English did not come off second best. So the Hollanders, for sake of peace, keep the Germans and us separated.

We were taken aboard the steamer that night and sailed the next morning. We had not been out from shore very long before we felt the effects of the previous day. We were a sick bunch of boys. About noon we gained enough courage to come on deck. The sea air soon revived us, and when dinner was ready we were able to do our share. It was just the meal that many of us had dreamed of when in Germany—roast beef with lots of brown gravy, creamed potatoes, fresh cabbage, Yorkshire pudding with a second helping, followed by rice custard pudding, and bananas.

We sighted the shores of "Blighty" that afternoon. From then on it was impossible to tear us away from the rail. We all gazed and gazed. The different ships in passing recognized us and signaled a welcome. On arrival at the docks there was a huge crowd on hand to welcome us home; also another banquet. We arrived in London about ten o'clock that night. We stepped from our train amidst the greatest cheering that I have ever heard. A lane was opened in the crowd, and we passed through. Our hands were grasped, but the people were too full of joy to say anything. But those handclasps said more than words—their appreciation of what we had done. There were fifty-seven fellows in our party, and we were the happiest fellows in the world.

Ambulances conveyed us to our hospital, where we were undressed, put to bed, and served supper before the lights were turned low.

Then I lay down, not to sleep, but to think. I thought of the day I enlisted in Canada, of leaving home, the training camps, the trip overseas to England, the training in England, going across the channel to Flanders, the terrific fighting at Ypres, of the many friends who fell on that bloody battlefield, how I was wounded and captured, the inhuman treatment I received at the hands of the German surgeons, who had four husky Germans hold me down while they cut five bones out of my wrist and amputated my middle finger at the second joint when I was wounded in the palm of the hand, the kicks and cuffs from prison guards, and the terrible stuff the Germans called food in the prison camps.

I didn't stop at this. I thought about the cause of it all, and the great stakes we are fighting for. Before falling asleep I thanked God that I had had the privilege of doing my small bit in saving the civilization of the world from the blight of the Kaiser and his Hun hordes.

Our June Number

A FEW of the interesting articles in the next issue are: The Great Experience—"Over There," by R. E. Morrison; Your To-morrow's Beefsteak, by Wirt Stephens; My Son—and the City, by Donald Morton; Uncle Sam, Railroader, by John Snure; A Farmer-Governed State, by M. G. Franklin; This Little Pig Went to Market, by H. H. Haynes; Hendricks Hobbies, by W. L. Nelson; Furnishing Your Home, by Elizabeth Anthony; and a double page of pictures entitled Hun Handiwork.

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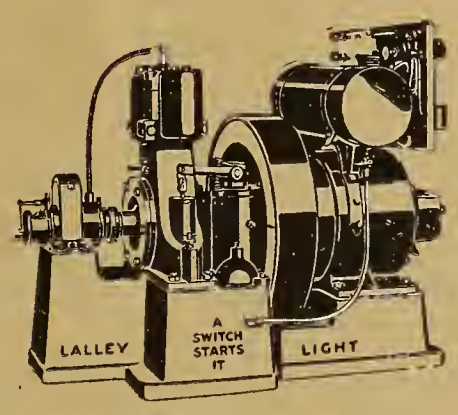

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Planning Your Canning

By Flora G. Orr

TWO big facts face the farm woman. We are at war; the food must be preserved as never before. That is the first fact. But as for extra workers, hired help, labor—call it what you will—well, every farm woman knows "there simply ain't no such animal." That is the second fact.

Early in the season is the time to sit down and think. A carpenter doesn't go to work to build a house without tools, and the woman who is going to preserve food has no right to assume that she can work without them either.

Have you a fireless cooker and can you afford to buy a pressure canner? The fireless cooker can be made at home if you feel that the expense of buying one is too much. The cost of the pressure canner—around $20 for the small canning size, holding 12 quart cans—may sound alarming, but if you can afford it at all, do not hesitate. It will pay for itself many times over in the end. If you cannot afford it, be honest enough to say so to yourself, and remember that the home-made water bath is still at your service, and ready to give satisfaction.

In fact, you will want the water-bath outfit anyway, so it is well to see that your wash boiler has a well-fitting cover and a false bottom which one of the men can easily make for you from laths.

Tops and rubbers for your jars are of primary importance. Many rubbers last year were of very poor quality, and much spoilage resulted. No rubber should ever be used twice. When a can of fruit or vegetables is opened, the rubber should be discarded and saved for the "rubber man." To test new rubbers pull and jerk them. They should spring back to their original shape.

Valuable tests for the tops of jars are: Screw on the top without the rubber. If the thumb nail can be inserted between the top and the glass, the top is usually defective. Put on a glass top without the rubber. Tap the top edge. The top should not rock. Sometimes jars are defective at the top. This can only be ascertained by running the fingers over the spirals. If they are smooth the jar is probably good.

Just a word here. Don't throw away defective glass jars, those which will not screw tight. Use them to hold cereals, dried beans, peas, and the like; or use them for jelly and jam. Every available piece of glassware should be used this year. Small-necked bottles can be used to hold fruit juices.

It may save time and trouble later to test jars by tempering them, not on the day they are to be used, as is sometimes directed, but before the canning rush begins. To temper jars they are put in cold water, brought to a boiling point, and boiled twenty minutes. If they are imperfect they will probably break in the tempering instead of the canning. It is not a pleasant experience to have the jars break after the hot food has been poured into them. It may happen anyhow, but it is not so likely to do so if this test has been made with success. We will assume that you have tested jars and tops, purchased and tested new rubbers, got ready your apparatus. So much for canning.

You will want to dry—especially vegetables. A special apparatus is not essential, but is very helpful. If this can be got ready before the rush season commences you will bless your foresight many times.

In order to conserve your strength in the most efficient manner, you should plan to do a little of the work each day. It is wise to gather from the garden and the orchard not just the amount of vegetables and fruit which you happen to need for the meal, but rather to take all the tomatoes, beans, peas, etc., which are ready for picking and which will spoil if left on the vines. You can get the surplus ready for the drier or can it in odd minutes while you are getting dinner.

It would be impossible as well as very foolish for one to attempt to preserve all fruits and vegetables in the same way. Drying and the various methods of canning should all be used. One will fit into the other, so that no time need be wasted and more than one thing can be done at once.

With careful planning a clever housewife can use two or more canning methods at the same time

It may as well be admitted that, while greens, asparagus, beans, and peas are more desirable canned than dried, the *sure* canning of these takes considerable time unless you have a pressure canner. Corn is also difficult to can by ordinary methods, but this need bother no one, since dried corn is so delicious.

Preservation by drying is so satisfactory for navy beans, pumpkin, okra, and squash that it would be unwise to use up glass containers by canning them to any great extent. Some fruits dry very well. No woman can be excused for wasting apples when they are so easily dried. Extra peaches, pears, and plums may also be preserved by this method.

In general, canning is most desirable for tomatoes, eggplant, cauliflower, rhubarb, grapes, berries, and the other fruits. Each housewife will have to decide for herself what she is going to do about string beans, lima beans, peas, and asparagus. Certainly they should not be wasted.

The open-kettle method of canning should be used only for tomatoes and fruits. The cold-pack method can be used for all fruits and for most vegetables, provided enough time is given to processing.

The water bath, using the wash boiler with the false bottom, is the most convenient method for the cold-pack, except the pressure canner, but in an emergency the oven may well be made use of by placing the cans on a board bottom in the oven and keeping the heat very moderate during the time of cooking.

The cold pack can easily be done with the fireless cooker by following these steps: Partially cook product or pack cold into clean jars; fill jars with syrup or with brine and other ingredients; pack into fireless cooker kettle and cover with boiling water; place cover on kettles and lock cooker. Leave overnight or until cold; seal cans immediately.

With careful planning a clever housewife can make use of two or more of these methods at the same time, and an afternoon's work may have more to show for it than was formerly the case. For example, if she must can both fruit and vegetables at the same time, it is wise to plan to use the cold pack for the vegetables and the open kettle for the fruit. It will be well to lock the door and devote one's energy to keeping track of the "irons in the fire."

No attempt has been made in this article to go into the details of the cold-pack method, which has already been explained many times. The chart at the bottom of this page, which is issued by the University of Wisconsin, gives the whole thing in a nutshell.

It is well to remember that sterilization is the most important thing in canning. All jars, covers, and rubbers should be thoroughly washed and cleaned. When the open-kettle method is used, the rubbers, covers, and jars should be washed and then put into a large pan on a rack or thick pad to prevent them from resting on the bottom of the pan. They should then be covered with cold water, which is brought slowly to the boiling point and allowed to boil ten minutes.

Scalding and blanching is absolutely necessary in preparing vegetables and some fruits for the cold pack. It consists in immersing the prepared vegetable into boiling water or steam and leaving it there for a few minutes. This process shrinks the material.

The cold-dip process should always immediately follow the scalding and blanching. It consists merely in dipping the blanched material into very cold water. If the sack containing the material to be blanched is fastened on the end of a stick there will be no danger of burning the hands.

Syrups are usually added to fruits and brines to vegetables. When the jar is tightly packed with material, the brine or syrup should be poured into the jar until it is completely full.

Canning syrups are prepared by mixing two cupfuls of sugar and three cupfuls of water and boiling for different lengths of time. Thin syrup is just brought to a boil, medium thin is boiled two or three minutes, medium thick is boiled six to eight minutes, and thick syrup is boiled eight to twelve minutes. With the present sugar shortage, corn syrup should take the place of at least part of the sugar.

Brine for vegetables is made by adding one level teaspoonful of salt to a pint of water. Jars filled for the cold-pack process should be closed lightly—not sealed tight—during the processing. If a wash boiler with a false bottom is to be used for the processing, the jars should be covered with water.

Count time after the water begins to boil and see to it that the water is kept boiling vigorously until the time is up. Directions for operating the pressure cooker come with it. These should be followed carefully.

Drying works well for corn, navy beans, pumpkin, squash, okra, peas, apples, peaches, pears, and plums.

Open-kettle canning works well for tomatoes, rhubarb, and all fruits. Cold-pack water-bath canning works well for all fruits, rhubarb, beets, carrots, cauliflower, tomatoes, radishes, and eggplant. Cold-pack pressure-cooker canning works well for everything.

Kind	*Preparation*	*Hot dip (minutes)*	*Cold dip (minutes)*	*Processing in boiling water (hours)*	*Processing in pressure canner (minutes)*	*Remarks*
Asparagus	Wash, remove tough end, cut to fit jar, tie in bundles.	5	½	3	50 at 5lb 25 at 15lb	Remove string before packing in jar. Can or dry tough ends for soup.
Beans (Lima)	Shell and wash.	2 to 5	½	3	60 at 5lb 40 at 20lb	
Beans (String)	Wash, string.	2 to 5	½	3	60 at 5lb 40 at 20lb	May be left whole or cut into narrow strips or inch pieces.
Beets	Remove tops, leaving three inches, wash.	Boil until skins loosen (about 1 hour).	1	1½	60 at 5lb 35 at 20lb	Remove tops, skin and roots after cold dip.
Carrots	Remove tops, scrub.	Boil until skins loosen (about 20 mins.)	1	1½	60 at 5lb 35 at 20lb	Skin may be removed before packing in jar.
Cauliflower	Wash, break into clusters, soak in salt water (2 teaspoons salt to 1 qt. water) 2 hours.	3 to 5	½	1½	30 at 5lb 20 at 15lb	
Corn	Husk.	5	½	3	60 at 5lb 35 at 20lb	Corn should be removed from cob before packing.
Peas	Shell and wash.	3	½	3	60 at 5lb 40 at 20lb	
Radishes	Remove stems and roots, wash.	Blanch 3 for medium size; 5 for large size.	½	1½	20 at 15lb	
Tomatoes	Wash and remove stems.	Scald until skins loosen.	½	½	15 at 5lb 10 at 20lb	Remove skins before packing; tomatoes may be canned whole or in pieces. Stem, cook, and strain imperfect tomatoes.

A Canning Chart for Vegetables

In the Spy Net

By EMEL PARKER

SHE smiled wanly at this, feeling the warmth of Carl's hand on hers.

He went on.

"Before I had been here more than a day I knew that I loved you, and that I would always love you. And then I began to day-dream—to picture life as it could be for you and me. I felt that I had no right to speak of this to you. I was a guest in your house, a stranger to you, about whom you knew nothing. I could not tell you about myself then, and unless I did I knew I had no right to tell you that I loved you. And then, not long ago, I could not stop the words—they seemed to come unbidden to my lips. Eugenia, after that night things began to go badly with us. I was well enough to go on with my work, and this led to evasions on my part, and to a general feeling of uneasiness and distaste for the work which up to this time I had always been proud of. I think this change in me communicated itself to you," he continued. "At least, it seemed to me that you changed. You began to avoid being alone with me, and you began to look at me as if asking yourself critical questions about me. And then when I could not go to you frankly, because of my work, I began to see that my work would keep me from the fulfillment of my dreams. The other day I told you that I would give anything I possessed if I could put my problems before you. I said then that I could not. But I have changed my mind, for I feel that I owe it to you to show you how relentless is my master. Eugenia, on the twenty-third of this month I must leave the United States. I must cross the Atlantic—a dangerous journey now, and doubly so for me—and go to one of the supposedly neutral countries of Europe. Perhaps from there I shall have to go into the belligerent countries, under the most hazardous circumstances, traveling under an assumed name, my life in constant danger. And at last, if I survive—home. Then I could go home." He laughed mirthlessly. "That is the kind of life I would have to offer you, Eugenia."

Eugenia's head was whirling, but at last she answered gently:

"To a woman who loved you none of those things would matter."

He leaned toward her, speechless with emotion. She put up her hand as if to check his thoughts.

"No—none of those things would matter. I do not know about most women, but to me there is only one vital thing, one thing that would matter. I see that I too must be truthful with you, though I fear it will be painful for us both."

SHE withdrew her hand from his. "I knew that your name was not Carl Stackpoole," she went on. "For the first day you were here I saw, by accident, the contents of your bag, and they were marked 'R. K. M.' But I tried to forget this, knowing that there might be some explanation which you would make presently. Then the days went by, and you said nothing; but gradually I thought less and less about it, for I too found our companionship something for which I had always hungered and never found. Now that it is all over I can tell you that—tell you proudly. On the night you said that you loved me I sat by my window in the dark, and I saw you slip out from the house, toward the woods path that leads to the sea."

The man drew in his breath sharply.

"The next night I saw you go again, and I followed you. I saw that you got into a boat. Oh, I did not follow you because of curiosity, but because I wanted to defend you against the suspicions which began to creep upon me. But when I knew that whatever you were doing you were not acting alone, I began to have definite fears. Of course I know that the American Navy has an experimental station somewhere near here—you remember that I always said that you seemed slightly foreign to me?"

He nodded, but he did not speak. He was leaning toward her, his cigar unlighted between his tense fingers, as if to miss no word she spoke.

"THEN the next day when I went down to see Liza's granddaughter I started to walk home by the beach road, and by mere chance I saw a boat making for the shore. I saw a man get out of the boat and put something in the sand. After he had left I dug it up, and found it to be a message in code. That night I got Liza to obtain your red leather book, and I deciphered the message. I learned then that you were to leave my country on the twenty-third, and I also learned the terrible thing I had feared was true."

Stackpoole looked as if he would never recover from his astonishment.

"What courage!" he said at last. "And what shrewdness! I cannot help admiring it, no matter what its cost may be to me."

He looked into the fire for a moment, as if endeavoring to become calm.

"So when you found out what my work was, you knew that you could never share my life?"

"Of course I couldn't! I could forgive anything in the world but that. Oh, I know that you may look upon your work as being necessary, and even honorable, but I cannot. No doubt my own country employs men somewhat in your capacity, but I do not believe that they needlessly take lives. As I look at you now it is impossible for me to comprehend that you of all people could so manipulate your plans as to cause death and destruction to poor boys who have never even been in a battle. Surely it is not fair—even you cannot think it is fair—to strike in the dark!"

His face had grown white.

"I don't think I quite understand you," he said.

"Take the Stepham, for example. Not because it's named for Father, but because three young lives—boys not over twenty—have already been killed because of the work you and your agents have done in attempting to cripple the boat before she can even get into the war. War is bad enough, but this cowardly fighting is inexcusable; and you ask me if I could share life with you—an enemy of my country!"

Suddenly she heard in the distance the sound of dry leaves being crunched underfoot. As the sounds came nearer, Stackpoole turned sharply.

He spoke quickly, as if fearful of being interrupted by this intruder.

"Eugenia, there is one thing I must know—one thing you owe to yourself and to me to tell me the truth about. If it had not been for this one unpardonable thing, would you have shared life with me? Would you have married me, have risked all these dangers and discomforts with me?"

"Yes, gladly!" she cried.

He made a movement as if to take her in his arms, but at the loud pealing of the doorbell drew back.

In another moment old Sam came in, trembling with excitement.

"Two gentlemen, Miss 'Genia. One waiting outside, and the other has come in. Says you'se expecting him."

"Show him in when I ring this bell."

As the door closed behind the servant, she rose.

"Carl," she said firmly, putting her cold hand in his, "I must tell you this: Nothing in the world could have kept me from sharing [CONTINUED ON PAGE 34]

What Has Happened

VERY early one morning, a stranger, ill and drenched with rain, came to Eugenia Stepham's home on a lonely island off the coast of Georgia, where he was received and cared for. During his convalescence he and the lonely girl were much attracted to each other. Eugenia discovered that he was leaving the house late at night, and that in the morning he was weary and worn. She became convinced he was a spy trying to wreck a submarine destroyer on trial, near-by, since several of the sailors had been killed through the work of some unknown enemy. He confessed to Eugenia that Carl Stackpoole is a name he has assumed for business reasons, and that the work he is doing for his country is standing between them, grinding his love for her, and obliterating his chance for happiness.

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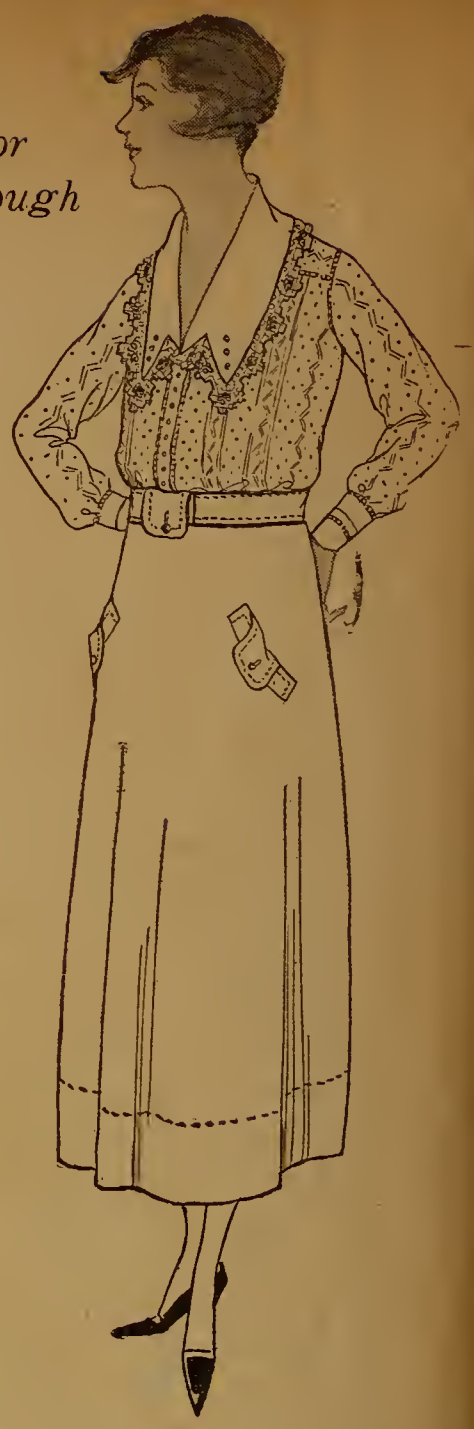

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IN SUMMER you always want a stylish wash dress of cotton for general wear. Something you can use at home and yet when you wear it on the street looks stylish and appropriate. No. 38 will prove just the dress for such needs. It is made of chambray in pink or blue and daintily trimmed with white organdy, and embroidery for collar edge. The smart pocket and sleeve edges are also trimmed with the organdy. Sizes, 36 to 44 bust. Price, $3.95.

And quite as necessary as the one-piece dress is the separate skirt and blouse in all white. No. 39 is a very dainty model of embroidered white cotton voile, with collar and cuffs of plain white voile, the collar edged with wide lace and trimmed with pearl buttons to match those on the front of the waist. Sizes, 36 to 46 bust. Price, $2.00.

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No. 41—Afternoon Dress of Striped Lawn. $4.95

No. 42—Chemaloon, a new style combination. $1.25

THEN for afternoons and evenings and hot Sundays No. 41 will prove comfortable and at the same time dressy. The thin materials like organdy, lawn, and batiste are so fashionable this season that the model of striped lawn is sure to be popular. The material is white, with the stripe black, blue, pink, lavender, or green. Sizes, 36 to 44 bust. Price, $4.95.

You all will be interested in No. 42, the new chemaloon, which takes the place of the old drawers and corset-cover combination and the envelope chemise which have been popular for so long. It is really a chemise with the lower part in closed drawer style, plaited at the side to give extra room without bulk. It's cool and comfortable to wear and very dainty in fine white batiste made in Empire style and trimmed with valenciennes lace and pretty satin ribbon. Sizes, 36 to 44 bust. Price, $1.25.

It is difficult these days to get clothes that are inexpensive, and as the supply is apt to run out before many weeks be sure to send your order in early to get just what you want.

Looking Your Best

Things You Can Do to Increase Your Weight

By MARGARET DRUMMOND

"HOW can I get fat? Is it possible for me to put on more weight?" are questions that reach me in every mail, and the answers are very easily made. If you want to get fat you have only to remember certain things, but you have got to remember them every hour of the day, and there are certain rules which you will have to carry out every hour of the day. Roughly speaking they are three: Don't hurry or worry; eat plenty of nourishing food; get lots of rest.

The wisest plan to adopt before proceeding on any course of treatment, however, is to consult your doctor. Have him examine you thoroughly to determine to what your thinness is due. It may be nervousness; it may be some physical disorder. Get right down to the root of things and find what the reason is. And when you talk to your doctor don't be afraid to tell him everything. Tell him your daily life, the conditions under which you live. He will understand everything, and it will give him a basis to build on. If you have no physical disorder and you have nothing to worry about in that way, then the following treatment will help to build your flesh, slowly but surely, into the weight you ought to have.

An exercise which will keep all the muscles supple

Last month I gave you a table of weights according to height and age and a story of how you can reduce your weight. For the benefit of those who may not have saved this table, I am repeating it. Keep this in front of you, and if you will carefully consider the things that reduce weight, it will be easy to find out the ones which will add a few pounds. Simply reverse the order of instructions given there about getting rid of superfluous flesh. First of all—don't hurry or worry. Nothing will make you thin more quickly than worrying or hurrying. Don't hurry in your daily work, whether it is household work or going down to the office, and don't worry. Take things calmly. If there are certain things in your life which look pretty bad, remember that they might be a lot worse. Just reflect on this and you will be able to take them more lightly.

FOOD: There is nothing better than eggs and milk as a diet for putting on weight. For breakfast, which should consist of fruit, oatmeal (with cream), two soft-boiled eggs, coffee or tea (with cream), drink a pint of warm milk. Between breakfast and lunch drink another pint of warm milk, and be sure to sip it, as gulping it down is an almost sure cause of indigestion, and that would defeat the object you are trying to attain. For lunch or dinner eat any nourishing meat, such as chops or steak, with baked potatoes and other vegetables. With this meal drink another pint of milk. In the middle of the afternoon take still another pint of milk, but omit it at the evening meal, taking it at bedtime instead. In heating the milk be careful that it does not boil. A pinch of salt or a little pepper added to the milk will make it more agreeable to some palates.

The egg treatment given by some physicians calls for six raw eggs a day—two at a time. The best way to take them is between breakfast and lunch, between lunch and dinner, and then about an hour before going to bed.

Break the eggs into a glass, one at a time, season with a little salt or sherry, and swallow whole, as you would an oyster.

NO MATTER which particular diet is observed, much nourishing food, eaten slowly, is the one rule. Olive oil, used externally as well as internally, is very good for the woman who wants to add a few pounds. She should use it plentifully on all foods and take a tablespoonful before each meal. At night she must take a quick hot bath, followed by a vigorous rub with a Turkish towel, which will open all the pores. Then, from top to toe, apply the olive oil, rubbing it into every part of the body. The pores being open, the oil will readily be absorbed, and there will be very satisfactory results in a short time. In addition to being soothing, this treatment is very good for the complexion.

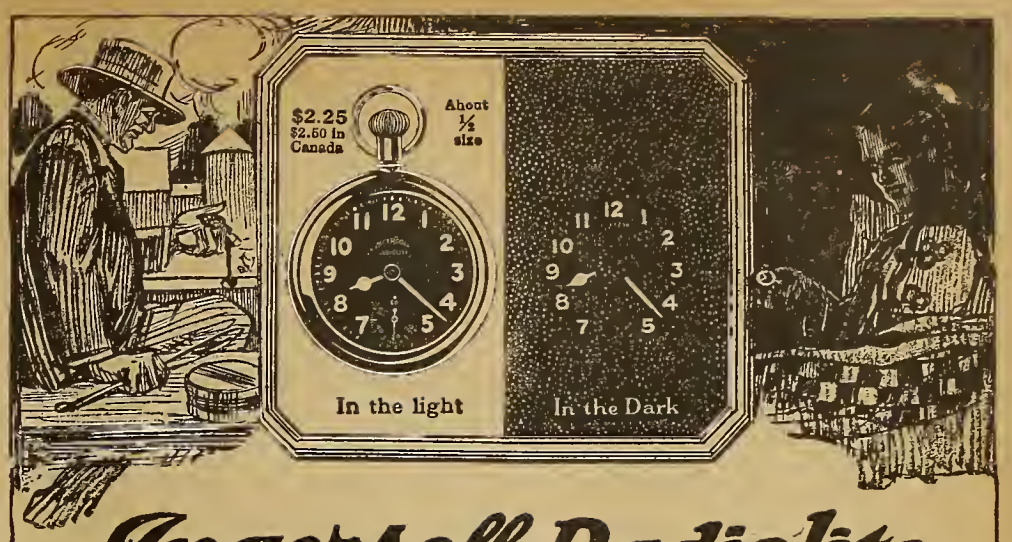
With all of these treatments you must be careful to choose the foods that are nourishing as well as fattening. In addition to all meats, eat potatoes, beets, lima beans, corn, eggplant, turnips, carrots, rice, all breakfast foods, eggs, home-made bread, plain cakes, and dessert, such as rice pudding, tapioca, cornstarch, and the like. Cocoa is better than tea or coffee as a beverage.

REST: Ten hours a night is not too much for the woman who wants to gain weight, and in addition she must remember never to stand when she can sit down, and never to sit when she might as well lie down. A half-hour's rest in the middle of the afternoon is a very good thing, and the rest and sleep must always be taken in a well-ventilated room with all clothes loosened. Exercise every day, but be careful not to overdo. Walk in the open air, breathing deeply, and above all things keep your mind calm, as that is the most important thing of all to the woman who wants to get fat.

IN ANSWER TO J. R., OF MONTANA: As it has taken your back a number of years to get in its stooped position, you must remember that this work cannot be undone in a few weeks or months, and that only persistent effort on your part will correct it. Practice this exercise for ten or fifteen minutes at a time several times each day: place a broomstick across the back, allowing it to extend through the bent elbows. Let the hands rest on the chest, and keep the arms and shoulders pressed down. Practice standing, sitting, and walking correctly and, when sleeping, lie flat on the stomach and never use a pillow.

What You Should Weigh

	Ages: 15-19	20-24	25-29	30-34	35-39	40-44	45-49	50 over
4 ft. 11 in.	111	113	115	117	119	122	125	128
5 ft. 0 in.	112	114	117	119	122	125	128	130
5 ft. 1 in.	115	116	118	121	124	128	131	133
5 ft. 2 in.	117	118	120	124	127	132	134	137
5 ft. 3 in.	120	122	124	127	131	135	138	141
5 ft. 4 in.	123	125	127	130	134	138	142	145
5 ft. 5 in.	125	128	131	135	139	143	147	149
5 ft. 6 in.	128	132	135	139	143	146	151	153
5 ft. 7 in.	132	135	139	143	147	150	154	157
5 ft. 8 in.	136	140	143	147	151	155	158	161
5 ft. 9 in.	140	144	147	151	155	159	163	166
5 ft. 10 in.	144	147	151	155	159	163	167	170



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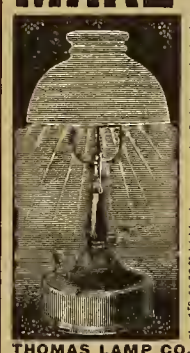

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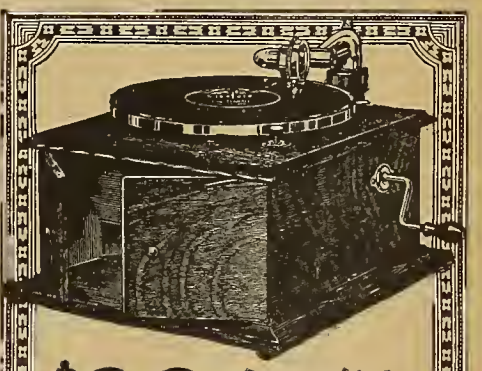

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The Cornus blooms early in spring

One Cornus Stolonifera (Red Osier Cornell.) The white flowers, 3 to 4 inches across, are borne very early in the spring, before the leaves appear, and remain many weeks. White berries and dark red bark. Foliage variegated in the fall.

One Deutzia Dainty, bright green, compound foliage. White or rose-tinted, tassel-shaped flowers are borne thickly in wreaths along the branches, in June. Makes beautiful cut flowers. Shrub grows 6 to 8 feet high, with long, graceful, drooping branches.

The dainty tassel-shaped flowers of the Deutzia

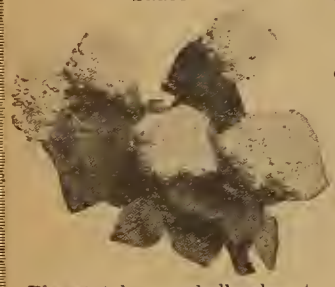
One Rose of Sharon A beautiful shrub of rapid growth, bearing a profusion of flowers in many shades of red and yellow, through late fall, when so few other flowers are in bloom. Grows 12 feet high. Light green foliage turns bright yellow in fall.

The flowering Rose of Sharon

Two Japanese Barberry (Berberis Thunbergii.) Dwarf. Neat, dense foliage. Brilliant yellow flowers in early spring followed by bright red berries that remain through the winter. Grows spherical in form, but may be trimmed to any shape.

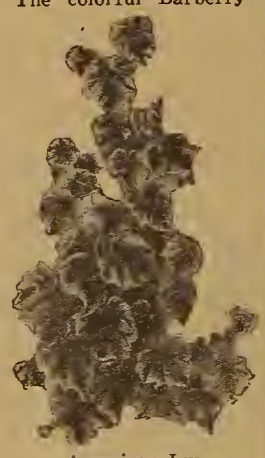
The colorful Barberry

One Snowball Hydrangea (H. Arborescens.) The flowers are borne in dense spherical panicles, in summer, resembling clumps of snow, and almost entirely concealing the foliage. One of the most beautiful shrubs that grow. 6 to 8 feet high.



The stately snowballs almost conceal the foliage

One American Ivy (Virginia Creeper, Ampelopsis Quinquefolia.) A persistent climber, clinging to wood, brick, stone or stucco. The foliage overlaps, giving a "shingled" appearance. In the fall and winter the leaves are resplendent with brilliant colors.



American Ivy

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We will send you one of these collections at the right time for planting in your locality either with a renewal of your own subscription or for getting up a small subscription club. Here are our offers:

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If you send your own new or renewal subscription only, this form will meet all requirements. If you send a club, write the names and addresses of your subscribers on a separate sheet of paper and attach this coupon bearing your name and address.

Rainy-Day Clothes

By JANE MACPHERSON

IF WE give but a few minutes to the selection of our clothes for rainy days, we can add with our dress much of the warmth and cheerfulness that is lacking in nature. Bright-colored dresses are appropriate, and give a pleasant note to otherwise gloomy surroundings.

If one must go outside of the home in rainy weather, high shoes with rubbers, a short dark skirt which does not soil easily with rain and mud, a rain coat, a rain hat, and dark gloves should be worn. However, a bright-colored tie or blouse will give a warm note to the costume when the wraps are removed.

Red is a color of warmth, and looks well on rainy days. Golden-brown, purple, and bright shades of blue and green are cheerful colors. Dull grays, blues, and greens should be worn only on bright days. Light materials should be saved for warm, sunny weather or evening wear.

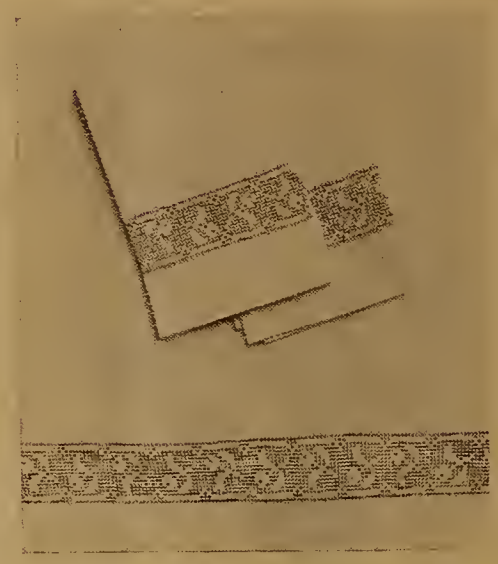
SPINACH BALLS—Pound to a paste the yolks of three hard-boiled eggs, and rub smooth with the yolk of one raw egg. Season to taste with salt and pepper and a tablespoonful of melted butter. Drain one and one-half cupfuls of cooked spinach very dry, chop, and press together through a sieve. When cold mix well with the egg yolks, and form into small balls, egg and bread crumb them, and fry a few at a time.

ASPARAGUS SALAD—Boil until tender one bunch of asparagus that has been cut into inch lengths. Drain off the water, and season the asparagus with salt, pepper, and butter. Arrange in the bottom of a salad bowl or on individual salad dishes, and chill thoroughly. Chop rather coarsely a dozen sweet pickles, a small onion, a little parsley, a small green pepper, two small stalks of celery, and two hard-boiled eggs. Mix together lightly, and stir in one teaspoonful of celery seed, a saltspoonful of sugar, and two tablespoonfuls of mayonnaise dressing. Arrange on the asparagus and serve very cold.

RHUBARB AND BANANAS—Cut a pound of rhubarb in pieces, add one cupful of sugar and a half cupful of water, and steam. When cooked, add one and one-half tablespoonfuls of gelatin that has been soaked in one-fourth cupful of cold water twenty minutes. To a cupful of sifted banana pulp add juice of half a lemon, one-half cupful of orange juice, one-half cupful of sugar, and one and one-half tablespoonfuls of gelatin soaked in cold water as above directed. When beginning to set, fold in a cupful of whipped cream. Put a layer of the rhubarb jelly in a mold, then a layer of the banana cream, alternating until the mold is filled. Place in ice box to harden. Serve with whipped cream.

ASPARAGUS OMELET—Beat three eggs, add three tablespoonfuls of milk and a little salt, and beat again. Put a rounding teaspoonful of butter in a hot frying pan. When the butter is melted, pour in the eggs and turn the fire very low. When the eggs are set, pour over one half of the omelet a cupful of asparagus tips boiled until tender and seasoned with salt and pepper, fold the other half over the asparagus, turn the whole on a hot platter, and serve.

Attractive Bed Linen



FOR complete directions for this filet design, send four cents in stamps to the Fancy-Work Editor, Farm and Fireside, Springfield, Ohio. Order No. FC-105.

Kind	*Preparation*	*Hot dip (minutes)*	*Cold dip (minutes)*	*Processing in boiling water (minutes)*	*Processing in pressure canner (minutes)*	*Remarks*
Apples	May be pared, cored, and cut into halves, quarters, or smaller pieces.	2	½	20	8 at 5lb 6 at 15lb	Use thin syrup
Berries	Pick over, wash and hull.	.....	.....	15	6 to 8 at 5lb 4 to 6 at 15lb	Use medium syrup. Imperfect berries may be mashed, strained, and used in place of water in syrup.
Cherries	Wash, remove stem. Pits may be removed.	.....	.....	30	6 to 8 at 5lb 4 to 6 at 15lb	Use medium syrup.
Currants	Wash and pick from stems.	.....	.....	20	10 to 12 at 5lb 6 to 8 at 15lb	Use medium syrup.
Gooseberries	Wash, snip off stem and blossom end. (Scissors may be used.)	....	.....	30	10 to 12 at 5lb 6 to 8 at 15lb	Use medium or thick syrup.
Peaches	.....	3	½	30	5 to 10 at 5lb	Skins should be removed before packing. Stones may or may not be removed. Use medium syrup.
Pears	Wash, pare or not as desired. Small pears may be canned whole or cut in halves or quarters.	3	½	30	8 at 5lb 6 at 10lb	Use thin syrup.
Pineapple	Hold top of pineapple with cloth. Use sharp knife, cut off skin, remove eyes. Slice down until core is reached. Cut slices into ¼-inch cubes.	10	.....	30	8 at 15lb	Use thin or medium syrup. Use water in which blanched for syrup.
Plums	Wash. Stones may be removed. If left whole, prick.	.....	.....	30	12 at 5lb 8 at 15lb	For sweet plums use thin or medium syrup. For sour plums use medium or thick.
Rhubarb	Wash. Cut into ½-inch pieces. Use sharp knife.	.....	.....	15	15 at 5lb	Use thin or medium syrup. If skins are left on rhubarb it keeps its pink color.

A Canning Chart for Fruits

The Little Blue Thermometer

By Maud G. Booth

EVER since Fairman could remember, Grandfather Fairman's big thermometer had hung on the long veranda at the north side of the farmhouse. And at seven o'clock every night he went out with Grandfather to see what the big thermometer could tell them about the weather.

For years the big thermometer had hung there alone. On the night before Fairman's birthday, when he went out to the veranda with Grandfather, his eyes opened wide. There beside the big brown thermometer hung a little blue one. It was a present for Fairman.

He looked it over carefully. It was exactly like Grandfather's, only smaller. There were the little figures at the side, and there was the gray quicksilver that would climb up, up, up in the glass tube when the air was growing warmer, and would slide down, down, down again when the air was growing colder. And there at the top was a little letter F exactly like the big letter F on the big thermometer.

"I am glad," said Fairman, "that my initial is on it. Now everyone will know that it belongs to me."

"That F doesn't mean 'Fairman,' my boy," said Grandfather. "It stands for the name of the man who first made this kind of a thermometer."

"Oh," said Fairman. He was disappointed. He had always thought that the big F on the big thermometer meant that it was Grandfather Fairman's.

"Well," he said, "I can make believe that it stands for Fairman, anyway. Why, Grandfather," he exclaimed, "this thermometer is so little! How can it tell about the weather as well as the big one can?"

"Can't a little boy tell the truth as well as a big boy can?" asked Grandfather.

"Why, of course," laughed Fairman.

"Well," said Grandfather, "all that little thermometer has to do is to tell the truth."

Every night Fairman could hardly wait for the time to look at the thermometers, and yet he was afraid to look. He knew that the big brown thermometer would tell the truth, and he would be so ashamed if the little thermometer did not say the same thing.

He need not have worried. It seemed as if the little thermometer did not know how to tell anything but the truth.

One night the wind blew hard. It shook the house and rattled the windows. In the middle of the night Fairman heard a loud crash.

In the morning they found Grandfather Fairman's big thermometer on the floor of the veranda. It was broken into a hundred pieces.

"You will have to buy a new thermometer now, won't you, Grandfather?" asked Fairman.

"No," answered Grandfather. "A new thermometer would cost too much, and I shall not need one, for here is the little blue thermometer as good as ever. It always tells the truth."

Fairman looked at his little blue thermometer. His eyes shone. Grandfather had said that it could always be depended on, because it always told the truth, and Fairman was very glad now that he had made believe that the little F at the top stood for Fairman.

New Puzzles

Transposition

An arrangement that has satisfied;
A sloping vale; the work of guide;
A conduit; a cargo to provide—
All these the letters four supplied.

Answers to Puzzles

Puzzles Printed Last Issue

Initial Change

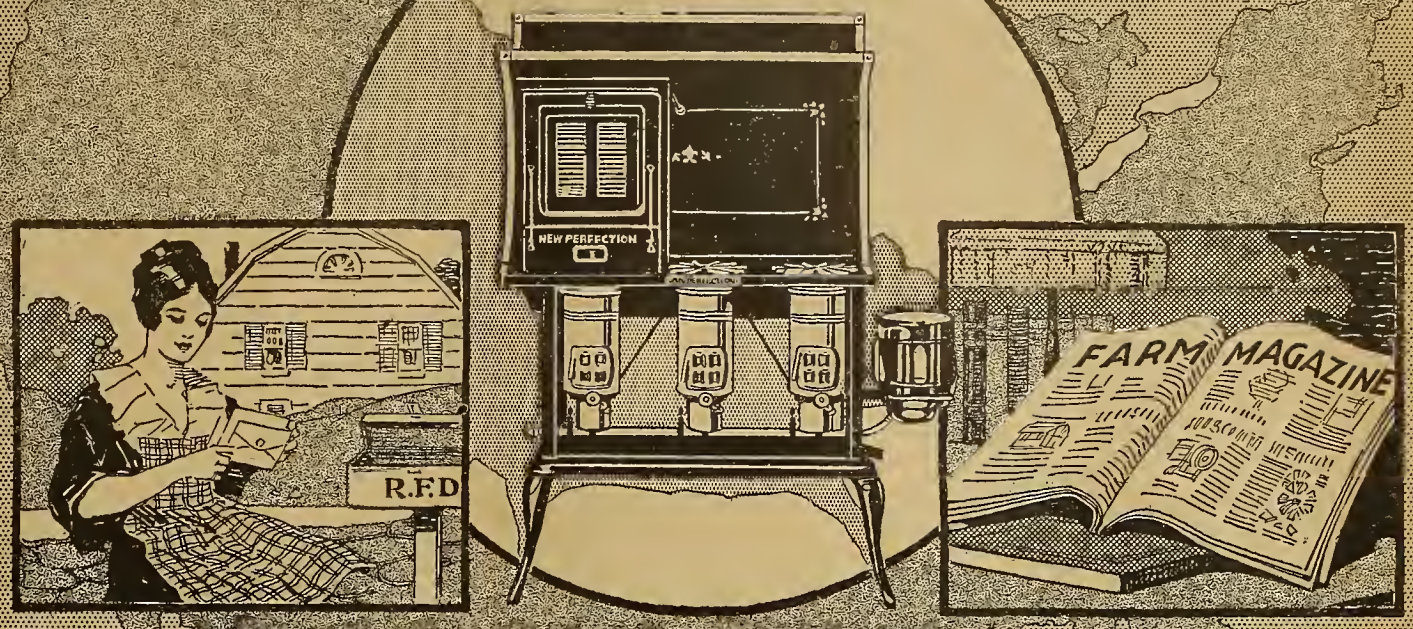
Cain, gain, pain, fain, lain, vain.

Twisted Titles of Famous Fiction

1. Paradise Lost. 2. Scarlet Letter. 3. Vanity Fair. 4. Kenilworth. 5. Silas Marner. 6. Idylls of the King. 7. Rip Van Winkle. 8. Talc of Two Cities.

NEW PERFECTION

OIL COOK STOVES



Three Great Influences that Benefit Farm Life

The Rural Free Delivery brings the daily news of the world to your front gate—Farm Magazines widen rural America's scope of interest.

New Perfection Oil Cook Stoves bring new comforts, conveniences and time saving to the farm wife. The Long Blue Chimney Burner of the New Perfection Stove gives gas stove comfort with kerosene oil—banishing forever the coal hod and ash pan.

A New Perfection Oil Cook Stove takes the drudgery out of kitchen work, shortens the hours required for preparing meals and gives you more time out of the kitchen—economical and saves coal.

The U. S. Fuel Administration authorizes us to say that if considers the use of oil cook stoves and oil heaters at this time a very important help in the necessary conservation of coal for war purposes.

The Long Blue Chimney Burner lights and heats instantly; turns every drop of oil into clean, intense heat. The flame stays where you set it—high or low. It is the fastest cooking oil burner made. The burners are made of brass—last for years.

New Perfection Ovens, with glass doors, bake perfectly. Fit any stove.

Buy your New Perfection Oil Cook Stove and Oven at any good hardware or housefurnishing store, or write us for New Perfection booklet.

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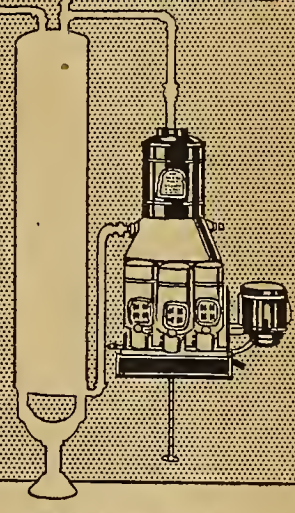
7412 Platt Avenue Cleveland, Ohio
Made in Canada by the Perfection Stove Co., Ltd., Sarnia, Ontario

The Long Blue Chimney Burner gives Gas Stove Comfort



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With a New Perfection Kerosene Water Heater. Gives you steaming hot water *quickly* for kitchen, laundry and bath. Ask your dealer or write us for folder No. 318.

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If you like the New Farm and Fireside
Why not help us to make it a still better magazine by telling your friends about it and asking them to subscribe.
One Year, 25c Three Years, 60c Five Years, $1.00

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Made by the Manufacturers of LePAGE'S GLUE

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Write Today For Our New Edison Book. Send your name and address for our new book and pictures of the New Edison Amberolas. No obligations.
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Disease germs flourish in the waste matter of sinks and drain pipes, often working their way into the water supply, the milk and food. Every sink, closet and drain pipe should be flushed frequently with a soapy solution containing plenty of

20 MULE TEAM BORAX

It cuts away the grime and grease and leaves the pipes clean and clear. Kitchen and pantry shelves—wherever food is kept or prepared—should be cleansed frequently with Borax. Nothing else will do it so easily.

Send for "Magic Crystal" Booklet. It describes 100 household uses for 20 Mule Team Borax.

PACIFIC COAST BORAX CO., New York—Chicago

We guarantee that every subscriber will receive fair treatment from advertisers. It therefore pays you to mention Farm and Fireside in answering advertisements.

MRS. CHAPIN SAYS

Nujol Laboratories, October 14, 1917.
Standard Oil Company (New Jersey), Bayonne, New Jersey.

Dear Sirs:

I don't think there was ever anybody, man, woman or child, who was or is more constipated than my little three year old boy was. The poor little fellow would almost go into spasms and his father could never stay in the room where he was.

He had been constipated for two years. *I think these patent medicines did it.*

We were going to try a well known woman who claims she cures without an operation, when I coaxed my husband to let me try Nujol. I had read so much about it, I told him even if it didn't help him it would not hurt. We tried it, started giving him three tablespoonfuls a day, one after each meal, then as his bowels moved better we decreased the dose as per directions. We used two bottles and a half and we cured him.

He has not taken a drop of it since last June. Again I say, God Bless Nujol, and I will never be without it or cease to recommend it.

463 Kiefaker St., Dayton, Ohio. Mrs. J. Chapin.

Nujol will help *your* child.
It's absolutely harmless. Try it.

In packages bearing Nujol trademark—never in bulk.

At every drug store. **Send 50c, and we will ship new kit size to soldiers and sailors anywhere.**

Nujol *for constipation*

Write for free booklet

"Regular as Clockwork"

In the Spy Net

[CONTINUED FROM PAGE 29]

life with you except that you are an enemy of my country. I told you once that my standards were more like those of a man than a woman, and I see now that this is true. You say that for a man there is something higher than love, so it is with me. When you have gone, the house will be empty and lonely beyond anything you can dream of. But each of us has to do that which seems right. You put your country first. I put mine. Your task has been difficult; so has mine. And now I must say good-by."

She pulled violently at the bell cord.

"What do you mean?" he gasped.

As if in answer to his question the door opened and a short, rotund man almost leaped into the room.

Eugenia went forward to meet him.

"Where is he?" he demanded.

She saw that in his right hand he carried a revolver.

"Put that down!" she said. "You will have no need for force."

Reluctantly the newcomer pocketed his gun.

"Is that him?" he said, looking at the tall figure of Stackpoole.

"Yes."

Stackpoole moved into the light.

"What's the meaning of all this, Demling?" he demanded sternly.

"Good God, it's the chief!" cried Demling, his round mouth falling open.

Then he turned toward Eugenia.

"But I thought you told me that you wanted someone to come down here to get a man?"

"So I did. That is the man."

"This isn't a frame-up joke on me, is it?" inquired Demling.

"Of course it's not," replied the girl sharply, feeling that a prolongation of this scene would drive her mad. "I wrote to you to come down here and get a man who is damaging, directly or indirectly, our navy—a dangerous enemy of our country. Now, here is the man!"

Demling looked at Stackpoole. Suddenly comprehending, he rocked with laughter. When at last he was able to speak, he was still shaking with mirth.

"But, ma'am, that's the chief himself!" he exploded. "Oh, this is rich! You addressed your letter to this very man, only we had no idea where he was, so the office opened it."

"The chief of the Intelligence Bureau of the Department, he means," Stackpoole explained.

"Of my country?"

"Yes, ma'am—the chief himself, the one you wrote the letter to."

Then, as the personal aspect of the situation struck him, and he realized how ridiculous he must seem in the eyes of his chief, Demling turned on Eugenia.

"It seems to me, miss, that if you could have learned so much about his actions and his work down here, you might have found out a little more, so that you wouldn't have written that letter. Why, I'll be a laughing-stock!"

He addressed Stackpoole now.

"YOU see, nobody took any stock in that letter but me—it sounded so convincing; and of course I knew that there was trouble down in this part of the country on account of that Stepham business. You were away, and we didn't know where to get you. In fact, we thought you might already be in Europe, so I came on my own hook. I had promised to take Mrs. Demling to Atlantic City, too. A nice time I'll have of it when I get back!"

"Not so fast, Demling; not so fast," said the chief. "If you are discreet enough to keep still, there need be no trouble for you when you get back. I've been wanting a good man to help me on my job down here, and you can just stay and do it. You see, Miss Stepham was quite right in thinking that I was interested in the fate of the Stepham. Only, the thing she couldn't know was that I was interested in saving the boat, not in injuring it. You see, we got word that one of the crew was a German, or in the employ of the Germans; but we couldn't locate the man. I've been going over to the naval base at nights and helping them, and finally, two days ago, we nabbed him. He was one of the mechanics that nobody suspected. Now, you stay down here with me, Demling, and when you go back you can say that you and the chief worked together on a little job."

Demling's eyes shone.

"Then you haven't been in Europe?" he asked, apparently eager to avail himself of this rare opportunity to be taken into the chief's confidence.

"No; I'm going very soon. I was ill when I left Washington, and I intended to take a rest. Then this thing came up, and I delayed going until it was settled—and for other reasons too. You were quite right to come down—to know that Miss Stepham's letter was worth paying attention to. In fact, although it is still a secret, I am hoping that she herself may be persuaded to join the Service. Is that right, Eugenia?"

The girl, still dazed by the emotional crises through which she had passed in such a brief space of time, read his meaning in his earnest dark eyes.

She continued looking at him and, although tears blurred her vision, her smile revealed her happiness.

She said, and the words were simple, yet in them she pledged herself for all life:

"*Everything* is right!"

[THE END]

A Conservation Party

By Emily Rose Burt

THERE is no party quite so appropriate nowadays as a conservation party. At one recently planned by a grange the admission was a thrift stamp, and the amount for several war savings stamps was thereby collected.

The invitations read as follows:

Since these be days when dollars shrink,
A conservation party, don't you think,
Will meet your need for funds and fun?
To this we welcome every one.

And please remember all the while,
You must come in conservation style,
With oldest clothes and hats, and wear
Unornamentally your hair.

P. S. Please bring your purse for fines,
In case you fail along these lines.

Upon arriving the guests were met by the members of a committee, each one wearing a conspicuous badge of office. In a prominent place hung a large placard reading:

FINES

WILL BE LEVIED FOR THE FOLLOWING LUXURIES

1. Curls, frizzes, waves, each.....1c
2. White collars, any description, each...1
3. White cuffs, each.....1
4. Lace or embroidery.....2
5. Ribbon or silk.....2
6. Jewels, real or imitation.....3
7. Gay colors, any material, each.....1
8. Buttons, each .....½
9. Ruffles or plaits.....2

The members of the committee made it their business to inspect each newcomer in turn and figure and collect the whole amount of the fine, as determined by the costume.

Conservation mottoes decorated the walls. They were printed in heavy black letters on big sheets of paper to attract attention.

Some of them were such as these:

Skimp, skimp again!
If wishes were horses!
If turnips were watches!
Eat excelsior bread!
Blessings on the barefoot boy.
Good-by, Dollar Gray!

With these as models, the first contest was announced as writing conservation mottoes. The originator of the best motto turned out in ten minutes was awarded a prize in the shape of a bonbon box filled with lumps of coal.

Then came a conservation fashion show. Out-of-date fashion plates or pictures containing costumes somewhat antiquated were displayed for the purpose of guessing the date. The winner was given a box of stuffed dates.

The next game, which was called a conservation contest, proved to be quite a jolly one. All sat in a circle and in turn had to answer the leader's question, "What do you do to conserve?" by replies beginning with the letters of the alphabet in rotation. The first few answers ran thus: Act abominably. Beg. Cut out candy. Drown.

Finally a short program of jolly Hoover verses and songs was given to end the entertainment of the evening.

NOTE: Song and verses suitable for a Hoover program will gladly be sent on receipt of a stamped self-addressed envelope. Address Entertainment Editor, FARM AND FIRESIDE, Springfield, Ohio.

This is Not Teddy—

Photo from Oscar Thompson

Nor is this Taft—

W. H. Ballou

Nor is this a Picture of Wilson!

Photo from A. L. Hughes

THESE are merely three pictures from a double-page picture section called "Doubles"—photographs of men who resemble famous men. It took six months to gather the photographs for this double page. There is only one magazine in the world in which such an interesting collection could have appeared. Some call it "that friendly magazine;" some "that big-little magazine of human interest." It is issued every week—52 weeks a year—and its name is ***"Every Week."***

Vitagraph

WE are proud to introduce Miss Alice Mary Moore, our first and youngest reader. When she was three days old she said quite distinctly to her parents, Alice Joyce and Tom Moore: "Don't think of staying home from the studio on my account." Mary Pickford is her favorite aunt.

Vitagraph

THIS picture was supposed to be entitled "Sunset at Coney Island"—but just as we snapped the camera there came a warning cry, "Look out! You'll stall your engine," and a dark object shot between us and the scenery. You can imagine how eager we were to develop the picture and see what it was. EVERY WEEK'S picture section is full of such unusual things.

E. O. Hoppe

HER head doesn't ache at all! So you need not feel sorry for her. She is just doing this to register sorrow at leaving her happy home in Derbyshire, England, to go and nurse the wounded soldiers in Russia. We are beginning to see why "wounded soldiers feel no pain." Read about her in EVERY WEEK.

Absolutely Different!

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Fox Film

JUST for fun we picked out the very least expensive one of all the "stills" submitted to us from the million-dollar production, "A Daughter of the Gods." Here is a lot of the Caribbean Sea, perfectly free. Ditto sky and air. As for the mermaid's costumes—very, very reasonable, we are sure. Of course, it cost something to transport them to Jamaica from New York, but they more than paid for their passage by acting as marshals of the 10,000 native blacks used as "supes." Each mermaid had under her direction 250 natives. (From EVERY WEEK.)

Triangle

NORMA TALMADGE is one in a half-million. The half-million and more that buy EVERY WEEK every week—and smile. Some folks buy EVERY WEEK largely for the smiles. Others for the best short stories of the week—or for some helpful suggestion, or bit of war news, or for the up-to-the-minute cullings of The Melting Pot.

ONCE upon a time Mary Pickford lost her temper. Right in the middle of staging a big picture. It was Mary's cue to appear in a few minutes. They brought her candy and white bunnies, and a fuzzy dog and everything, but Mary (see EVERY WEEK).

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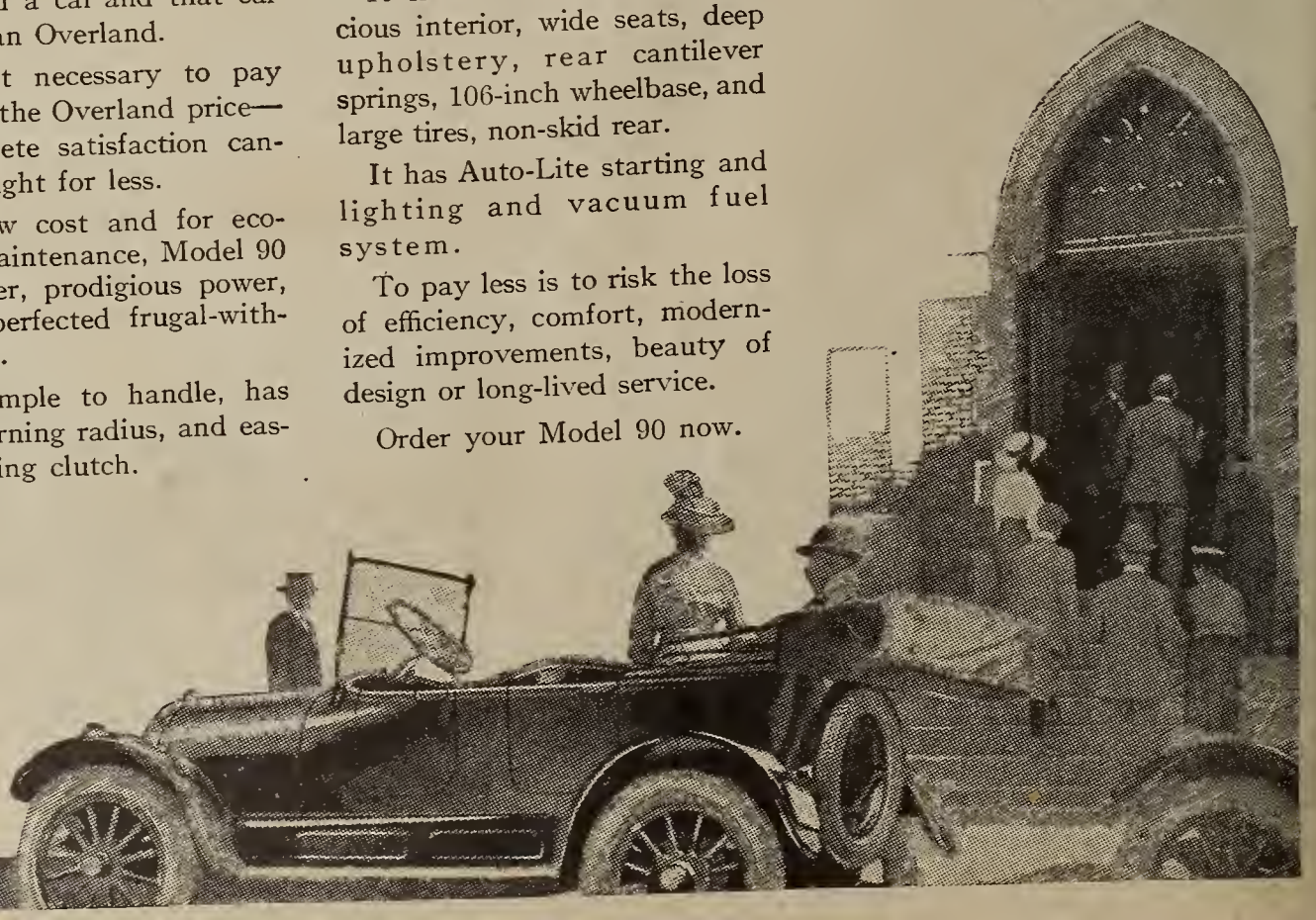

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FARM AND FIRESIDE

The National Farm Magazine

JUNE 1918 5¢ A COPY

The Great Experience "Over There"—By R. E. Morrison

Smiles and Smiles

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Some folks buy *Every Week* largely for the smiles. Others for the ringing words of the Editor. Still others for the best short stories of the week—or for some helpful suggestion, or bit of war news, or for the up-to-the-minute cullings of The Melting Pot.

But they all read *every single word* of this big-little magazine—and smile—and think—and feel a bit better for having read it.

And they tell their friends about it. And *Every Week* grows and grows—and more folks smile and smile—and that alone is worth while.

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FARM AND FIRESIDE

The National Farm Magazine

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The Great Experience—"Over There"

Uncle Sam teaches his Soldiers two things—to kill Huns now and after the war to be better citizens

By R. E. Morrison

WE ARE at war with Germany. We have raised an army of one million and a half young men to fight that war for us. We have put these soldiers into khaki uniforms. We have sent them to some one of the sixty-odd training camps located in different parts of our country. There, by a process of intensive training, they are being fitted for that great experience "over there"—the business of battling the Hun for the civilization of the world.

And now that they are uniformed, housed, fed, and drilled in the cantonments, is that the end of our worries, the completion of our responsibilities? Let us consider a moment: Is there any way in which the man in khaki can be kept happy and contented while in the process of being housed, fed, and drilled in a cantonment? Can it be made easy for clean and moderate living to be the rule when the soldier has leisure time away from camp?

The Government saw its duty along these lines at the very beginning of the war, and accordingly appointed the Commission on Training Camp Activities. The chairman, Raymond B. Fosdick of New York, in organizing the training camp's work and of giving to the soldiers healthy, wholesome amusement, called to his aid the Y. M. C. A. and the Knights of Columbus.

To these organizations the Commission delegated the work of supplying the men with club facilities within camps. Both organizations accordingly erected club houses in each of the camps, where showers, billiard tables, books, magazines, writing paper, pens and ink, pianos, and even a moving-picture machine, are at the disposal of the men.

Perhaps the greatest single achievement of the Commission's work is the supplying of athletics to the men in camps. This does not only mean the formation of teams, practice under trained sports directors, and actual playing of games, but also gives to every company a full athletic equipment which will be taken abroad with the company. Of all the sports enjoyed by the men, soccer and boxing seem to be pre-eminently the favorites.

At each of the army and navy training camps the Government has placed a skilled song leader to stimulate mass singing. Recently I was driving around Camp Devens at Ayer, Massachusetts, with the camp song leader. We came across a group of soldiers pulling stumps. The swing of their picks was uneven with the logging. The task was a hard one—there was no vigor or enthusiasm displayed. "We stop here a minute," said my driver. In a jiffy he flapped an oilcloth over his windshield. The men smiled and ceased their work, some squatting on stumps while others rested on their picks.

In another minute I had my explanation. Standing by his steering wheel the song leader beat time while the men sang the song written on the oilcloth. The singing was fair. Another song was tried, and then another. Each time I could see improvement, more spirit, more zest. At the end of twenty minutes, which had fairly flown, the song leader pulled up his oilcloth and prepared to drive on. "Come again," sang out the officer in charge, and from the back of the automobile I saw those soldiers pegging away at the stumps with renewed energy, almost enthusiasm.

That's one of the results we get because the Commission on Training Camp Activities believes that ours should be a singing army. So with this object in mind, the Government has published "Songs of the Soldiers and Sailors," which is the first book of its kind ever issued. The purchase price, five cents, is almost an investment, for through it the soldier learns the same songs that his brothers in the service are singing in all the camps.

Later on, when he reaches "over there," the mass singing will be just as spirited as in the training camps, for the boys will gather to sing their songs in common, and draw from that singing, cheer and comfort, producing a healthy morale among the troops.

Uncle Sam is a business man. Like all American business men he is a hustler. Since his entrance into this world war he has been constantly on the job looking after his nephews—our soldiers and sailors. They are a healthy, husky set, and they make enormous demands upon the shop keepers near their camps.

In return many of the shop keepers attempted to make enormous demands upon their none too enormous wealth. "That'll never do," said Uncle Sam; "the boys need a store of their own," and he gave it to them in the form of the Post Exchange. This part of the Commission on Training Camp Activities' work is under the supervision of Malcolm McBride of Cleveland.

For each regiment in the camp there is set aside a building where the regimental post exchange may vend its wares. The men are pleased with this mercantile enterprise, for at the exchange they can get many of the comforts and luxuries, such as shaving soap, candies, cakes, and tobacco, which Uncle Sam cannot afford to supply them. The goods are practically sold at cost, and when all expenses have been paid the profits are turned over to the regiment to be used as the soldiers will.

This is a great incentive for each man to patronize his own regimental post exchange, and the volume of business done warrants the constant operation of a motor truck to keep the store supplied. In some camps the business amounts to $1,000 a day.

We Americans, as a people, are progressive. We are constantly on the lookout for advancement, for promotion in business, for self-betterment in our particular walk of life. This holds equally true for the boys in our armies to-day. After their day of military maneuvers, tactics, and drills they want relaxation—and many of them find it in arduous mental tasks.

Our foreign-born naturalized citizen is eager and willing to labor over the rules of English grammar. Our American boy of a high-school education also wants mental development—possibly typewriting or mechanics, or a foreign language, will be his selection. Even the college graduate is calling for advanced courses in specialized subjects.

Uncle Sam saw that there was a need, and made generous arrangements to give the boys every opportunity to perfect themselves along practical or student lines. Some of our less far-seeing business men stormed and questioned: "French? All right! they will need that on the western front. But why all this energy expended on Spanish and English literature and American history? What place can all that have in the life of a soldier?"

Directly it can have no influence, but indirectly it wields a mighty influence, for it makes the soldiers contented, gives them a vista of an upward path which will be theirs to climb when the war is over. No matter what subject they choose to follow during their training-camp days, it is the very act of choosing to learn all about the job they are to do and then do it to their utmost, that shows the spirit of our soldiers.

Out of such material, such motives, ambitions and energy, Uncle Sam is molding in his training camps an American army which can first tackle the business of being a soldier, and after the war the business of a citizen—and handle both propositions with American thoroughness.

A Personal Message for You

RAYMOND B. FOSDICK, chairman of the War Department Commission on Training Camp Activities, sends this personal message to FARM AND FIRESIDE readers:

"You have a right to know that every possible measure is being taken by the War Department to supply to the million odd soldiers in training camps the same kind of recreation, education, and amusement that they have enjoyed in their home towns.

"Military life does not permit of so much leisure time for the men in camp as was theirs in civilian life, but everyone at home may be sure that their sons, and brothers, and friends in our army of to-day are being better looked after in this regard than any other soldiers in the world."

Although these boys sing "Hail! Hail! The Gang's All Here!" under the direction of a song leader, there are 44,984 other soldiers in this camp

Your To-morrow's Beefsteak

Unless cattlemen can at least break even—to say nothing of a fair profit—they will stop feeding cattle until after the war, when prospects look very bright

By Wirt Stephens

Because of competition with packer buyers, even the rough 900-pound feeder steers brought $10.25

NEVER in the history of the industry did the cattle feeder face a more promising outlook than during the late summer and early fall of 1917. Fat cattle were selling at unheard-of prices, reaching a record top of $17.90 a hundred at the Chicago market on September 22d, with an average on 1,200 to 1,500 pound cattle of $14.50 for the month. Good prices had prevailed during the year, showing a steady increase up to this time. Feeding operations, generally, had been profitable.

Due to efforts of the Government to bring about increased food production, the corn acreage of 1917 had been materially increased, and all indications pointed toward a bumper crop. The government estimates, as given out in September, indicated the greatest crop in the history of the country—a total of 3,248,000,000 bushels, which was an increase of 665,000,000 over the 1916 crop, and approximately 500,000,000 greater than the average for the five years previous.

In view of this enormous crop, the feeder was justified in anticipating reasonably cheap corn—dollar corn being talked of quite freely. This condition, together with the fact that the Food Administration about this time announced a world shortage of meat animals and urged farmers to increase the production of live stock of all kinds in order to meet the greatly increased demands of the allied countries and our own armies, gave the cattle feeder assurance of a good outlet and a reasonable profit on his venture.

Respond to Appeal

FARMERS, generally, responded to this appeal and purchased feeder cattle in large numbers. This fact is borne out by reports from the thirty principal markets of the country, which show that during September, October, and November the total movement of cattle to the country was 1,980,928, an increase of 416,351, or 26½ per cent, over that of 1916.

Contrary to the fact that all indications pointed to a reasonable profit for the cattle feeder, the winter's feeding operations have resulted, for the most part, disastrously. One has only to visit any of the central live-stock markets and talk with farmers to be convinced that the balance is on the wrong side of the ledger. While it is true that the greatest losses have been incurred on the more highly finished cattle, yet it is also a fact that in many instances cattle marketed in medium condition have lost money. Not only was the man who feeds a few cattle caught, but the big feeder as well.

The following statements, typical of many obtained from representative corn-belt feeders, serve to illustrate the present condition of affairs in the cattle-feeding business:

LOT 1

20 steers purchased October 18, 1917, were sold on Chicago market February 11, 1918. On full feed 116 days:

Initial weight, pounds	964	
Purchase price, per 100 lb	$9.60	
Cost per head	92.50	
Cost of 20 steers		$1,850.00
Cost of feed—		
1,044 bu. corn @ $1.25	1,305.00	
3 tons oil meal @ $62.50	187.50	
12 tons hay and straw @ $20	240.00	
Total cost		$3,582.50
Average cost per steer		$179.12
Selling weight, pounds	1,188	
Selling price, per 100 lb	$12.25	
Selling price per head	$145.59	
Marketing expense	3.37	
Net selling price		142.22
Loss per head		$36.90

LOT 2

66 steers purchased on the Kansas City market September 25, 1917, and sold at Chicago January 11, 1918. On full feed 109 days:

Initial weight, pounds	1,185	
Cost at home, per 100 lb	$12.57	
Cost per head	148.95	
Cost of 66 steers		$9,831.80
Cost of feed—		
3,597 bu. corn @ $1.25	4,496.25	
12½ tons of oil meal, cottonseed meal, and molasses @ $60	755.00	
36 tons hay and straw @ $20	720.00	
Total cost		$15,803.05
Average cost per steer		$239.41
Selling weight, pounds	1,441	
Selling price, per 100 lb	$13.00	
Selling price per head	$187.33	
Marketing expense per head	3.00	
Net selling price		184.33
Loss per head		$55.08

The hog gain will offset labor and interest charges.

It is not a difficult matter to explain the causes of these losses, now that the damage has been done. Of necessity, the majority of feed lots are filled during the months of September, October, and November, and during this period of 1917 record prices on all cattle prevailed. Feeder cattle prices at the Chicago market during this period ranged from $7 to $13 a hundred pounds, with cattle of any quality and weight costing better than $10 a hundred. The average price for September, October, and November was approximately $2 above the 1916 average for these months. Although the farmer realized these prices were high, it must be admitted they were not out of line with the prices being paid for fat cattle at the time, there being, on an average, a feeder margin of from 2½ to 4 cents a pound.

Medium-weight steers, with very little quality or finish, sold for $11.65 early this spring

What the Meatless Day Did

IN NOVEMBER the "meatless day" was inaugurated by the Food Administration. This unquestionably, more than any other one factor, has resulted in the losses being sustained by cattle feeders. The higher priced cattle have been affected more directly, due to strict observance of meatless day by hotels, clubs, restaurants, and dining cars, which furnish the principal outlet for this class of beef.

Also, the tendency on the part of the public to economize in the home has resulted in the increased demand for cheaper beef. The quite general elimination of meat from the home table on Tuesdays has curtailed consumption considerably.

These conditions, together with the fact that the army contracts call for a medium grade of beef, have resulted in a very narrow margin between common to medium and finished cattle.

There were 4,657,152 more cattle marketed in 1917 than in 1916, and more than 43 per cent of this increase occurred during the last four months of the year. This greatly increased supply of cattle on the one hand, and the decreased home consumption on the other, in addition to the fact that insufficient shipping space was available to move the surplus beef to the allied countries, necessitated carrying enormous quantities in the freezers.

The Food Administration believed that its purchasing powers for the allied countries would offset this condition; however, a recent statement by officials of the Administration show that less than five per cent of the total beef slaughtered from November 1 to the last of February was exported. According to reports of the Bureau of Markets, U. S. Department of Agriculture, the total holdings of frozen and cured beef in storage January 1, 1918 were 346,309,549 pounds. This is an increase of 29 per cent over that of January 1, 1917, and 133 per cent greater than the stock in storage September 1, 1917. Packers freely stated their coolers were filled to capacity, and used this as a means of "bearing" the market. [CONTINUED ON PAGE 22]

These 1,500-pound steers, sold recently on the Chicago market, represented a heavy loss to the feeder

My Son—and the City

"Fortunately, before it was too late, I woke up to the fact that I was giving the live stock better shelter and more comforts than my wife and children"

By Donald Morton

I AM not like my Scotch neighbor to the north. He tells me that when he was a young man he inherited ten pounds from a rich uncle. "Man," he adds, "I was such a spendthrift and a wastrel that by the end of seven years there was not a farthing left of the whole sum."

I never inherited any great fortune, as did my Gaelic neighbor. I was never a wastrel or roysterer; I have worked hard all my life, far harder than any of my children will ever have to work, I hope and verily believe.

There were a good many years when it was my ambition to have more land and more stock than any of my neighbors. That ambition died with my first-born, for the doctor's bills were large and there was sadness in the goodwife's eyes, and we had other things than money to think of. Followed then the years when I turned to public service for forgetfulness: township trustee first, school board next, and so on, until there were four years as county clerk.

I saw the rottenness of politics; I encountered the obstacles which the shrewd put in the pathway of the inexperienced. There were times when I cried aloud, literally cried aloud, and would have given it all up had it not been for the wife and the children. The county-seat newspapers have half-tone "cuts" of me, sort of "before and after taking" likenesses, and I've made good on a half-dozen or more notes which I endorsed for supposed friends—that's about the sum and substance of all the public serving I've done.

I may never have had the ambition to give my folks the most "homey" home in our township, to rub the wrinkles away from my wife's eyes, to keep the brood of children around us in a house as comfortable and well furnished as any we could have in town, had it not been for a little talk one night with my oldest boy. I remember it was snowing outside; funny how little, immaterial things stick in our minds, as big, sometimes, as the large, eventful ones.

I was reading the county-seat paper, stopping now and then to throw another stick of wood on the fire and to cram the sofa pillow more firmly in the broken window pane which we had neglected to repair before the cold snap caught us. I had been reading the "patent insides" and must have been nodding at the last, for the fire had died down and the room was chilly when the lad came in. He hadn't said much until I was shivering; nervousness as much as the temperature, I guess.

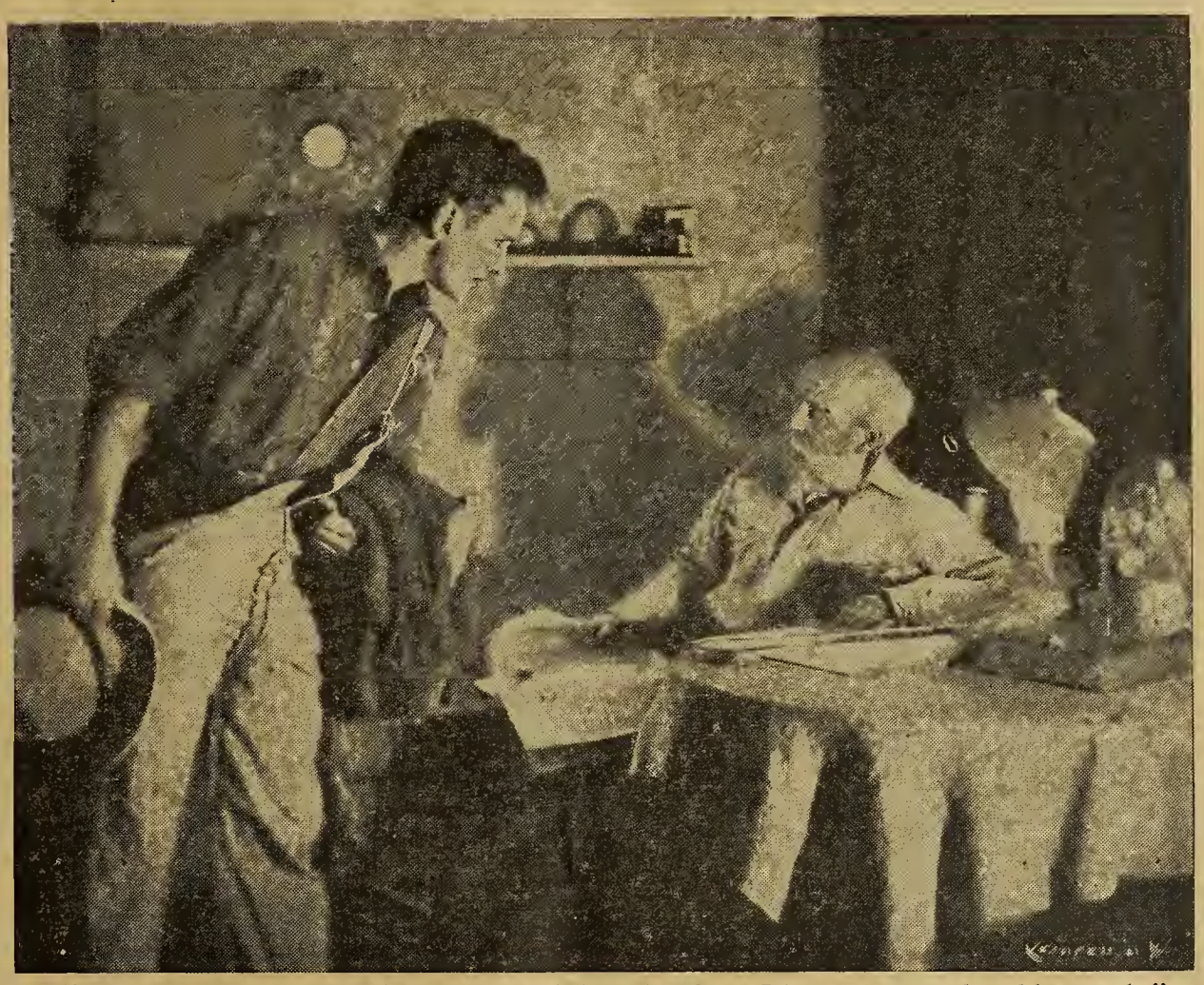
"I'm going to quit you, Father," he said, with determination written large on his countenance. "None of the other boys I know in town live like we do. I'm going where I can have some of the comforts of life, even if I have to work harder and pay a bigger price. I'm going; that's all there is to it."

I couldn't say anything for a minute. You see, there was a peculiar bond between the boy and me. He bore my name; he was the image of me. After the first lad died I was bitter. Many nights I lay awake, thinking of the little mound out in the graveyard. The tears would not come, though my eyeballs burned hot; it would have been better if they had come. Many days I found the tears blinding my eyes as I plowed the corn, row after row, and saw no farther than the turning at the fence.

Then the other boy came, and when I saw him I kneeled down and cried like a child and thanked God, and I gave the boy my name—and there he was saying he was going to leave me—me, who worshiped him down to his last fault.

There's no need of making a long story out of it. I built the new house to keep him home with me. I told the goodwife it was for her, but there was something in the eyes of the grown-up boy that night that was like the look in the eyes of the little one when he left me for the mound in the graveyard. I couldn't stand to have another boy go. I built the house.

I don't know why I didn't build it years before. I bought the home farm twenty years ago last March—160 acres to start with, paying $60 an acre. Eight years ago I added another quarter section, at $150 an acre. When I bought the first 160, corn was selling for 16 cents a bushel. The fall of that year I needed corn for feeding, and I bought 800 bushels of a neighbor for $100. Oats were selling then for about 10 cents a bushel, hogs for $3 and $4 a hundred pounds, and cattle and sheep in proportion. To-day I'm selling last year's corn for $5 for seed, oats for 65 cents, hogs for $18, and cattle for $15 a hundred pounds. I was offered $250 an acre for the whole half-section just a few weeks ago. Of course, the new house adds to its value, but land around here is worth four times what it was twenty years ago, figuring conservatively.



"I'm going to quit you, Father. None of the other boys I know in town live like we do"

And all the time I was getting rich, through the crops and increase in land values, I was making my wife and the children live in an old shack, without a single comfort or convenience. Truly, I am ashamed of myself. I gave the stock better shelter from the wind and cold than I gave my loved ones. It is enough to make me bow my head in shame at the very thought.

I visited our state fair last year, and one of the things which struck me was a sign attached to a model of a modern farmhouse. The sign read in this fashion:

"In 1914 it took 2,103 bushels of corn to pay for this house. This year it will take only 904."

A good many of my neighbors are putting off building, saying prices are so high it is poor economy to build now. If lumber is high, so is corn; if cement is high, so is wheat; if steel is high, so are hogs and cattle. The average farm price of this year's corn bids fair to be almost three times what it was, in this State, in 1912. I don't think lumber and other building materials have advanced in proportion.

Nor did that sign go far enough. It not only takes fewer bushels of corn to build a house to-day than it did in 1914, but we are also raising more bushels on the same acres, thanks to the things we are learning through state and federal bulletins and FARM AND FIRESIDE.

But this isn't describing my house and the effect it had on all our lives. I'd better get back to the main road, although the lanes and crossroads were always mighty attractive to me.

The first thing I did when I decided to build was to consult an architect. He charged me three per cent of the cost of the house for drawing the plans and writing the specifications. Some of my neighbors laugh at me and say I threw away that much money. I often wonder if they think it is throwing away money to pay a doctor for writing the prescription for the medicine which cures them and their loved ones.

The prescription itself doesn't do the work—it's the medicine the druggist gives us; yet we go to a doctor. The plans and specifications do not build a house—it takes masons, carpenters, plumbers, and so on; yet we should go to an architect. That's the way I figure it, anyway.

You know, when you come right down to it, typhoid fever, dysentery, and the like are common diseases among farmers. Why? Because we do not know enough about sanitation. Therefore, when we build, why not go to a sanitation expert and minimize the possibility of sickness? I am a farmer, not a plumber or a well digger or a chemist. How can I tell how far away from the barn and outhouse I should put my well in order to avoid all seepage danger?

What do I know about the proper wiring of my house in order to prevent fires? Would I ever have thought of putting the bathroom over the kitchen instead of the living-room or the dining-room, so that, should a pipe burst and the ceiling be spotted or seriously injured, the damage would not show or be so great? My house cost me $8,000; the architect's fees were $240. I shall always believe it was money well spent.

I went to the architect just as a sick man goes to the doctor; I knew I needed something, but I didn't know what. I told him my condition. There are two famous surgeons in the Middle West who charge according to what their patients are worth—an operation costs a millionaire $1,000, a poor man $10. I frankly told the architect what I could afford, and he went ahead and operated on my bank account accordingly.

I built a stucco house, rather a novelty in the country nowadays, but cement is the building material of the future, I believe. Part of the place is purely ornamental, no earthly use so far as shelter is concerned. Maybe I have been a wastrel and used up my ten-pound inheritance in seven years, as my extravagant Scotch neighbor did when he was young. But the ornamental work has brightened the eyes of the boy who was going away, and the girls who never threatened to go, but whom I would have lost, sooner or later, had it not been for the new house, I am sure. It was worth all it cost.

For instance, you enter the house by way of a cement-floor terrace or porch, without roof, which extends clear across the front and faces the road. From this terrace you enter a covered porch, screened-in for summer, glassed-in for winter. To the left as you enter is a big built-in closet for wraps, and encased in the door of this closet is a full-length plate-glass mirror which gives the ladies a good chance to see themselves as they take off or put on their wraps. I've a theory that a few more good mirrors in a farmhouse would keep wrinkles and stoop shoulders from being so common. Maybe not, but that's my theory.

Outside the kitchen, in the rear, is an additional room which we call the kitchen entry. In this room is a built-in refrigerator. Off another side of the house is a sun parlor, with glass windows and a radiator to keep it warm for winter, and screens for summer. Up-stairs there are three large bedrooms and a sleeping porch, with every bedroom having a large closet and every closet door a full-length mirror; none of those things which distort the features and make you look either like a roly-poly or a bean pole, but a good, honest mirror which shows the wrinkles in time to stop them, and enables a man to shave without leaving a cluster every here and there, like a spotted cornfield. There is a large bathroom, with both shower and tub bath.

The basement is my favorite, for it's here I can work on rainy days and in [CONTINUED ON PAGE 9]

A Farmer-Governed State

An interesting flier in democracy which has carried North Dakota just a little bit farther than any other State was ever carried before in so short a time

By M. G. Franklin

IF YOU are so fortunate as to be invited to lunch by Lynn J. Frazier, governor of North Dakota, on a Monday, you have a treat in store. You will not be served with fruit cocktails, lobster à la Newburg, charlotte russe, or even good old roast beef, medium. You will not be waited upon by humble servitors, anxious to forestall your every wish.

Instead, you will have the home-made doughnuts passed to you by the secretary of state; the auditor of state will cut you a liberal slice of the ring of bologna which he brought from home in the morning for the occasion; the superintendent of public instruction will fish a pickle for you out of the bottle; the governor himself will pour you a cup of coffee out of a big tin pot, into a cracked cup borrowed for the occasion from the custodian in the basement.

You will eat upon Bismarck and Fargo newspapers spread upon the heavy golden-oak tables of the governor's private office. You will have a "spread" such as you can obtain in no other state executive office in the nation, no matter where you may go.

The Monday "bologna banquet" of the North Dakota state officials. Governor Frazier is at the head of the table

The State of North Dakota is in the hands of the farmers. It is the only State out of the forty-eight to be entirely governed by farmers. Practically every one of the high officials went to the capitol at Bismarck from the farm he had bought years before for only a few dollars an acre, or had homesteaded when the State was young. Three fourths of the members of both houses of the legislature had the same agricultural beginnings. North Dakota is primarily a farming State; its government just at present is almost exclusively agricultural.

When Lynn J. Frazier received the news that he had been nominated for governor of North Dakota, he was urged to come at once to Fargo and address the convention which had thus honored him. "I can't come just right away," he said. "I've got my overalls on, and I'll have to drive back home and get some regular clothes." So he hurried back to the farm, got his "good clothes" and took the train the next day to Fargo to receive official notification of his nomination. "When I looked out over the audience of perhaps 3,000 people, I only saw one face that I knew," he told me. The convention had turned to the farm for a candidate; it selected a man whom it knew by hearsay to be a good farmer. The delegates did not know any more than that, but that was all they wanted to know.

That was the beginning of one of the most interesting experiments in government this country has ever seen. Whether we denounce the men at the head of public affairs in North Dakota to-day as Bolshevikis or praise them as patriots, no one can gainsay that the whole thing is an interesting experiment and worthy of investigation. It is a government by farmers, a flier in democracy which has carried a great State just a little bit farther than any other State was ever carried before. Not even Kansas, in the days of populism, went quite so far as North Dakota has gone in the last two years.

State's Hired Hands Meet Weekly

WHEN Governor Frazier quit the farm, the first farmer and the first North Dakota University graduate ever to be elected governor of that State, to take up his office in the capitol at Bismarck, he took his farm ways with him. He was not used to eating grapefruit in the middle of the day; he was used to talking over the farm problems—the planting and the cultivating, the harvesting and the threshing—with the hired hands as they ate their meals together, all around a common table. He took his farm ways into the governor's office, even to the extent of calling the State's hired hands to eat with him once a week, to talk over the State's planting and cultivating, the harvesting and threshing out of problems, big and little, for no one thinks of the size of the job.

When the noon whistle blows on Monday in Bismarck, Governor Frazier and his private secretary, Nelson Mason, pull the two large golden-oak tables in the governor's private office together; they spread newspapers over the top; they spread out the sandwiches and the doughnuts, the bologna and the red apples. The governor goes down to the basement and carries up the steaming tin pot of coffee. Then the State's hired hands settle down to the task of eating and talking business.

It was at such a Monday staff meeting—cabinet meeting, might be a better term—that it was finally and definitely decided to call the special session of last January to permit counties to issue bonds for the purchase and sale to farmers at actual cost of enough seed wheat to plant the acres which North Dakota normally devotes to wheat, making it the chief spring-wheat State of the Union. It was at such a Monday noon lunch that the State's hired hands decided to grant a moratorium to the boys who had enlisted in the army and navy, to permit them to vote in the trenches of France the same as in the booths of Fargo, Grand Forks, and Bismarck.

Most of the big and important affairs of State have been talked over and decided upon at these bologna banquets in the governor's private office. In the offices of most governors the fine mahogany or the heavy golden-oak tables look austere and forbidding. Around them every little while gather the railroad attorneys and the corporation magnates to talk party affairs with the governor. There are no such gatherings, there is no such austere solemnity about the tables of the governor's office in Bismarck. It is democracy, with a little d, though the railroad attorneys and the corporation magnates rage and storm and how Bolsheviki across the treeless plains of both Dakotas.

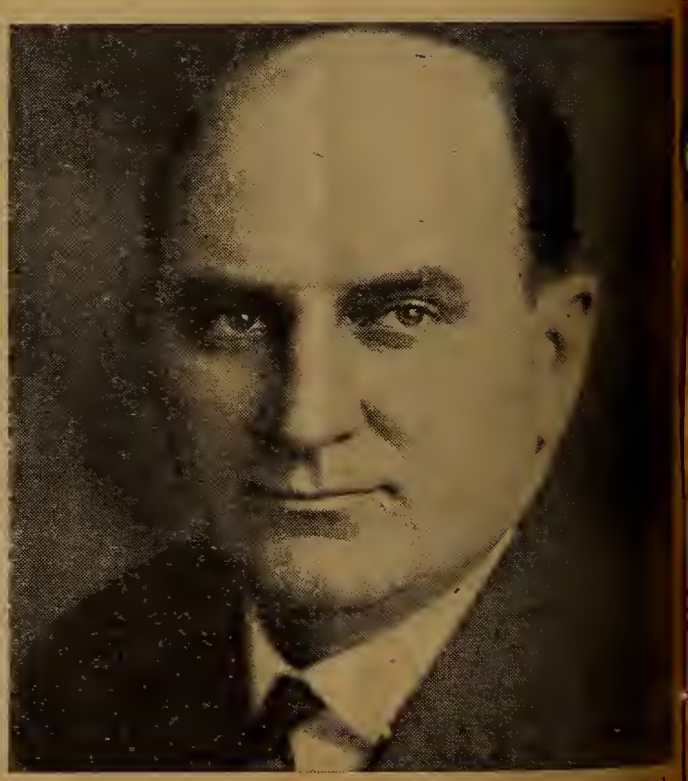
Governor Frazier doesn't care; he has a good farm to return to when his office-holding days are over. The other officials don't care, either. What with wheat selling for $2.20 a bushel and North Dakota advancing rapidly as a live-stock State, there are lots of worse things than having a half-section or a section of land to return to, should the voters finally decide that simplicity and bologna banquets on Mondays are not as desirable as high jinks in the legislative halls and a return to the rule of transcontinental railroads and elevator combine.

But simple noonday luncheons, such as are here described, democratic as they may be, would not of themselves justify an administration or prove the worth of an experiment in government. They are simply picturesque manifestation of the existing order of things. The things which have been done by two or three of the members around the bologna banquet board are of more importance. Let us consider first the case of the auditor of state, Carl R. Kositzky, the son of a Russian immigrant, who has done such notable things in a tax-collecting way as to deserve an entire article to himself.

Like the governor, the state auditor is a farm product. His boyhood and early manhood were spent on the farm. He was lured away from there to accept the position of county treasurer, and just to prove that a farm boy can make a good official he went ahead and collected $13,000 in back taxes the very first year in office. To add insult to injury, he collected the greater part of this money from politicians who had taken advantage of their influence and sinecures to escape taxation.

The farmer-treasurer might never have been able to bring them to time, except through the lengthy and expensive process of litigation, had he not adopted the policy of holding up the warrants of every tax dodger. Thus when the politicians had themselves drawn on the grand or petit jury, when they served as road overseers or otherwise saw to it that they fed on the public money, the county treasurer refused to pay them, even [CONTINUED ON PAGE 2]

Carl R. Kositzky, state auditor, who caused $20,000 of escaped taxes to be paid his first year in office



The governor, a wheat grower, signed a bill providing money for farmers to buy seed and feed

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JUNE 1918

What the German Has to Do to Win the War

IN THE early days of the war the German expected to capture Paris, and separate the French and English armies. This accomplished, he planned to overwhelm first the English army, and then the French—and win the war.

Now the German hopes to do, after nearly four years of bloody fighting, that which he failed to do the first month of the war. What chance of success has the German? He is trying to capture Amiens now—a position that he held when he tried to capture Paris before.

If the German could capture Amiens now, or even Paris,—and he is sixty miles from Paris—he could not get a decision for himself. Large numbers of French and English troops, together with American, Belgian, Italian, and Portuguese troops, stand in his way. And the Allies, because of their superior air service, can't be surprised.

The German doesn't outnumber the Allies on the western front. He has won a thousand square miles of French soil at a fearful toll in lives lost—a price that he can't afford to pay long.

But ground gained or towns captured mean nothing for the German unless he can separate the English and French armies, and deal with them separately. If he fails to do this, he has not only lost the greatest battle of the war, but has lost the war itself.

The talk of any city being the objective of the German is misleading. His plan is to separate the English from the French, if that can be done, and outflank, roll up, rout, and destroy or capture either or both armies and the rest of the Allies.

Whether the German succeeds in his purpose depends primarily upon the defense of the English and French this summer. If he hasn't separated them before fall he will have lost the war.

When the fighting begins next spring we will have such numbers of troops in France that it will be possible not only to drive the German out of France and Belgium, but to drive him far back of the Rhine—and win the war. This will not be an easy or a short job, but we and our allies will have men and munitions enough to do it.

Investing Without Money

ABOUT the most inexpensive thing that anyone can do is to be neighborly—at least, friendly. It applies to the man in town as well as on the farm.

The other day we were talking to a friend when a well-dressed man of thirty-five passed us. Our friend looked up as this man passed by, but the man did not speak. Then our friend told us an interesting story.

The man who had passed was a clerk in a bank. He was receiving teller—merely a helper whom they could hire or fire as they pleased. He happened to work at the bank where our friend did business, and for more than a year he had been meeting this clerk, but not once had he ever passed a pleasant remark through the grating as they were transacting the business, or had he ever ventured a civil "Good morning!" when they met face to face on the street.

He will probably be a cheap clerk all his life. No man can prosper without friends, and friends must be won through a pleasing personality and worthiness. Without the personality the latter trait may exist long before it is discovered.

The president of that bank doesn't act that way. He's rich, but he can't afford to be a snob. He smiles like he is glad to see you. He grips your hand. He knows everybody and can call them by their first names. He asks some questions that prove beyond a doubt that he remembers the children, and inquires about something in which he knows you are interested. He's too big and smart to be snobbish—he's made plenty of money, and he made a big part of it by making people like him.

It pays to be pleasant, and the secret of having a pleasing personality is being able to talk agreeably about the things the other fellow is interested in. It is the most subtle flattery in the world.

Pass Sunshine Around

SOME man in a place of power does not walk just as we think he should walk. Down comes the big stick over his head. The skulls of many men who are trying to do the best they can are sore from top to bottom.

And it doesn't pay. No man was ever made a stronger man or a better man by being found fault with constantly. That sort of thing paralyzes and brings defeat. Helpful criticism is a good thing, but mere faultfinding doesn't get us anywhere. Sunshine warms and makes crops grow. The farmer has had to come in for his share of the criticism in the past, and it hurt him more than any other one thing that ever happened to him.

There is sunshine enough to go round, if we all let it shine. The trouble is not so much that we want all the sunlight for ourselves as it is that we keep it from shining on the other fellow. If we only knew it, the grandest and the best thing any of us could do would be to say to our fellows: "Come on out here, Old Man! There is plenty of room for us all to stand in the sunshine. I believe in you; you believe in me; and we both know in our hearts that this is a good old world."

If we did this we would all get our shoulders together; we would lift more and kick less. And that would bring the glad day for which we have all been looking, when trouble will take wings unto itself and fly away.

To Linger Longer

ONCE a contagious disease gets a firm foothold in a community, country or city, it is difficult to stop. The reason is partly that some persons habitually disregard rules for safeguarding health. They pay no attention to ordinary rules of sanitation, to disinfection, or to any other well-established mode of preventing or destroying disease.

But there is another reason for the spread of disease. Modern science has proved that there are many persons who are immune from a particular disease. Some persons are immune from scarlet fever, some from measles, without reference to whether they have had the disease or not. A person may, curiously enough, be immune at one time and not at another.

Nevertheless, a person who is immmune may be capable of carrying the disease to others. He is a "carrier," as physicians say. The germs that cause the disease are in his throat, his nostrils, or some other part of his body, and cause him no inconvenience—he does not even know that they are there. As soon, however, as he comes into contact with a person who is not immune he may give the disease to that person.

This explains how a disease may start in a community without any apparent reason. Some carrier of the disease has innocently entered the community, and has started what may become an epidemic.

As soon as a serious disease is discovered in a community it should be traced to its source. This may be water, it may be a food product, it may be a carrier. Whatever the source, it should be discovered and eliminated. People can abstain from impure water and food, once they are discovered. The germs in the person of a carrier can usually be destroyed by a few days' treatment.

State and county boards of health in all parts of the country are becoming constantly better prepared to stamp out disease. But the time to put the board of health on the job in a community is when the disease first appears, not when it has become epidemic.

Your Judgment

WHEN American manufacturing and other city business speaks, it gets a respectful hearing and, in many cases, what it wants and needs. The attention given to industrial matters in connection with the war would have been impossible twenty years ago. It is a good thing; it helps business and it helps the Government. But how has it been made possible? Simply by organization.

When the United States Chamber of Commerce met in annual convention in April, it represented more than half a million strong American business men. The action that it took mirrored the sentiment of business men in every part of the United States, from the Philippines to New England. The votes which the association takes by mail on various problems are similarly representative.

If the farmers of the United States will form a similar organization, unbounded by fixed opinions of any sort, founded merely for the purpose of expressing the farmer's uninfluenced judgment, it will command the attention of every legislative body in the country. It will command the attention of American society as a whole if it represents all the farmers.

There are many good organizations among the farmers. But they represent ideas that not all farmers favor. What is needed is an organization whose platform is so broad that every farmer will want to belong to it. Such an organization can express the sentiment of the farmers of the nation. No other can.

June Roses

MOST of us are only interested in roses when they are in bloom, as they are now in the "perfect days" of June. We admire their color, their grace, and their fragrance. If only we could plant them when we are enthusiastic about the blossoms, we would have the finest collection of roses imaginable.

The same is true of other flowers. When violets or asters or mignonettes or columbines are in bloom, then we want them—then only do we think of planting them.

Right now, when so many flowers are in bloom, we can take a lesson from our past experience. We can look about the yards of our friends and neighbors in town and country, pick out the kind and varieties of flowers that we especially love, make note of attractive methods of grouping them, and find out from our friends the best methods of planting and growing them.

Any farm home can be made beautiful with flowers. The country, not the city, is the natural place for flowers, and it is in their natural place that they are loveliest. Flowers will do more than any other one thing to make the farm home attractive and to keep the old place a blessed reality, or—if the children leave it—a blessed memory, in the hearts of all who have ever lived there.

Bigger Corn Crops

IN THE same family two sons are born. They have the same parents, they receive the same home training, they go to the same schools. One of them makes a million dollars, becomes the most successful farmer in his State, or perhaps writes the greatest book of the century. The other lives from hand to mouth throughout his life, and dies, known only to his neighbors—and to them merely as a shiftless, unsuccessful farmer. What is the difference between the men? Individuality, we answer—that mysterious, indefinable quality which makes a person what he is.

But individuality is not confined to men and women. Seed from two ears of pedigreed corn from the same field, planted side by side and cultivated precisely alike, yielded, one at the rate of 95 bushels, the other at the rate of 17 bushels to the acre. Individuality again.

This is a big idea for a boy to grasp. When he has grasped it, he has got at one of the great secrets of life. Why not give the boy an acre of ground on which to make ear-row tests of the corn that you have selected for planting. Let the boy discover the patriot ears and the slacker ears.

The results of the test will be of big value next year in the corn-planting on the farm. Even more important than that will be the enthusiasm that the boy will have acquired for farm matters and the insight he will have gained into that strange, vitally important thing—individuality.

My Son—and the City

[CONTINUED FROM PAGE 5]

winter. It extends under the whole house. There is a good-sized vegetable room, a room for the wife to store canned goods, a coal- and wood-room, a boiler- and furnace-room, a laundry-room, and a little workshop for me. Next to the laundry is a drying-room, where the clothes can be dried indoors when it is bad outside. In the laundry I have a combination water heater and laundry stove, built-in tubs, and a chute where the clothes come tumbling down from up-stairs, so they won't have to be carried all through the house. Even with an electric washer laundry work is no picnic, but there are no more "blue Mondays" at our place, believe me.

I made only one mistake, as I see it now, and that was in not having the garage a part of the house, so I could heat it in winter. I had only a cheap, second-hand car when the architect drew up the plans—and what's another burst radiator to such a car? Now I've got a regular car, and I need a heated garage. If you're planning to build, don't overlook this; it is important.

A little while back I promised to tell you the effect the new house had on all our lives. I can't do it. Can you tell the effect the sun has on your life? Can you sit down and figure out, in dollars and cents, the value of good, fresh air? Neither can I compute the value of our changed way of living.

I have seen it figured out that a woman, without running water in the kitchen, lifts a ton of water a day. It goes something like this: The water is brought into the kitchen from the pump, it is poured into a kettle, poured from the kettle into a dishpan, and from the dishpan it is dumped outdoors. The water in this simple operation is handled six times.

A bucket containing two gallons of water will weigh 20 pounds. Handling it six times means a total weight of 120 pounds. The cooking of three meals a day—on a meager allowance of water, necessitating the use of buckets and pans—means lifting for cooking alone 1,200 pounds a day. When to this we add the water for bathing, scrubbing, and the weekly wash we have the overburdened farm wife lifting a ton a day. I think too much of the companion of my life to compel her to do this.

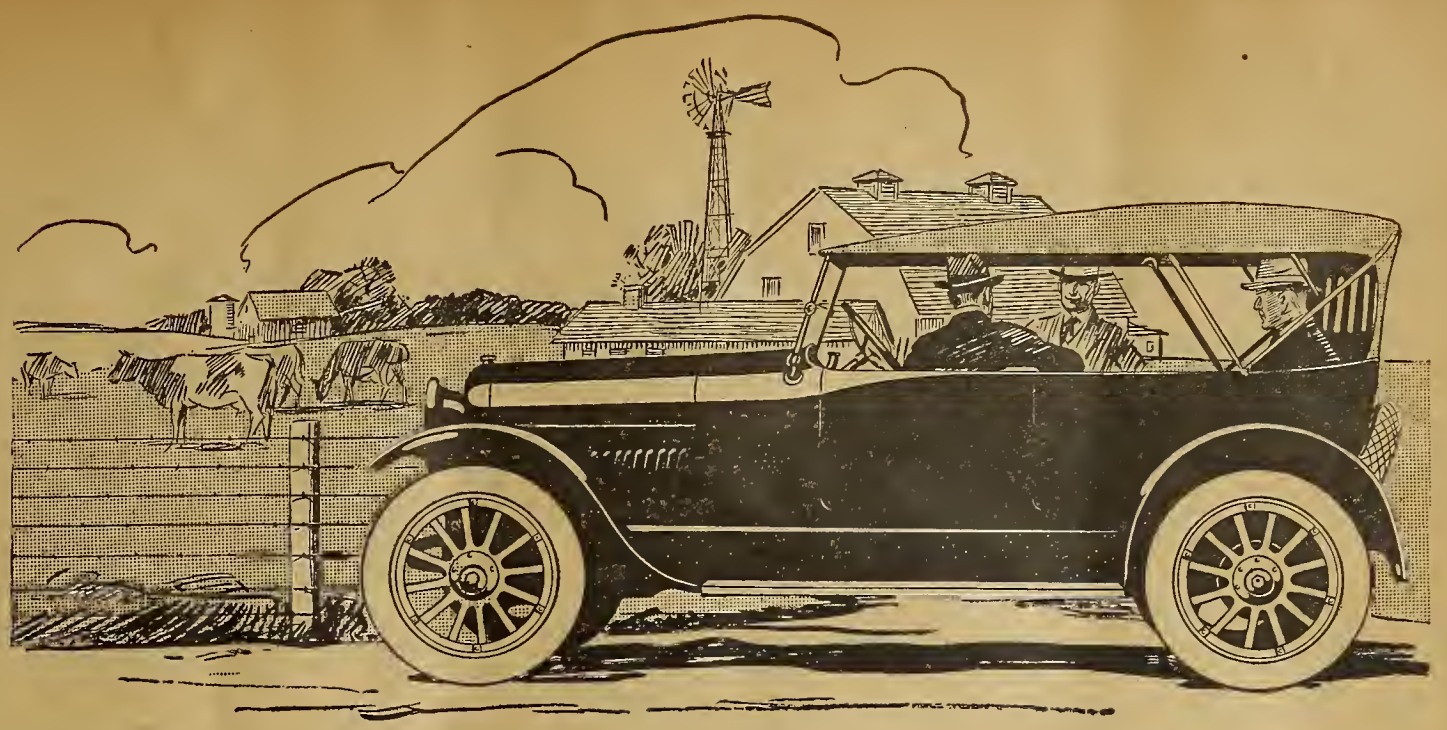
Now, with running water, both hot and cold, in laundry, kitchen, bathroom, and small toilet on the first floor and basement, there is none of this burden-bearing. Can I figure this out in dollars? No. I can figure it easier in wrinkles which are missing, eyes which are sparkling, hair which is still black, shoulders which are still straight.

My children are all with me to-day, save the little one under the sod in the graveyard. Had I built the house of gold and set the window panes in diamonds, they would have been worth it all, and more. You can't argue these things: they're just so. I was figuring out last night how much more the taxes were on this place than on the old home. It looked a little bad on paper. Just then two soft hands went over my eyes and a sweet voice whispered in my ear: "You're the best daddy there ever was in the whole wide world, and I love you!"

What do I care for taxes! Why, I'd even squander a ten-pound inheritance in seven years and still consider myself the wealthiest man in all creation.

Our July Number

A FEW of the interesting articles in the next issue are: Bagging a Hun Over London, by Sergeant Dean Lamb; A New Security for a Loan—Your Character, by Charles Henty; Health Unbought, by Darwin Cobb; Ten Acres—and a Living, by Alice Mary Kimball; Drying Vegetables and Fruits for Winter Use, by R. P. Crawford, and a double spread of pictures entitled "At the Training Camps."



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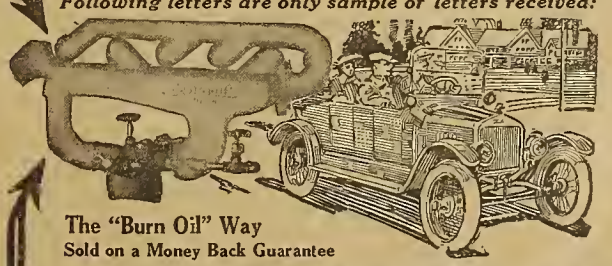

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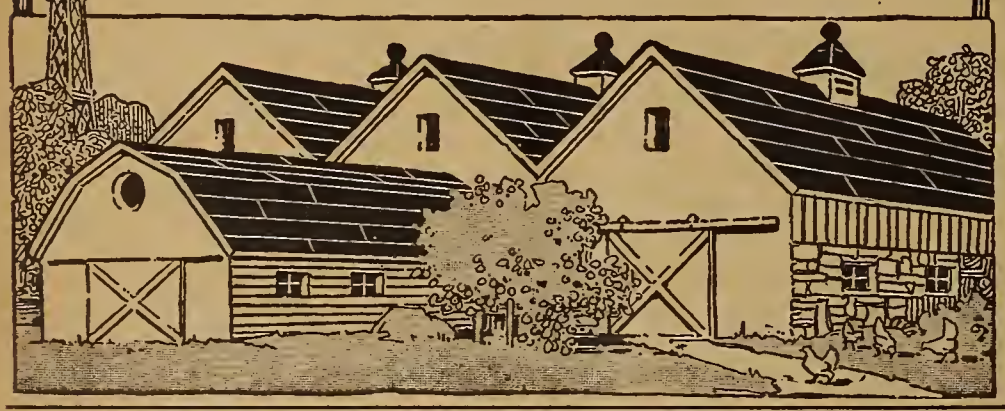

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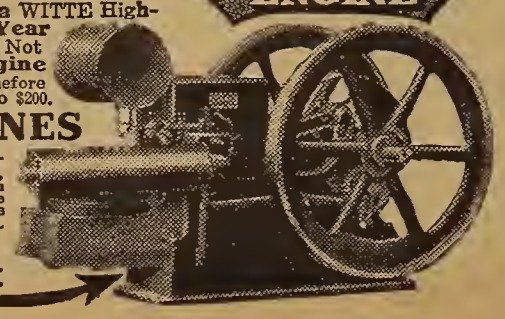

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"A little nonsense now and then is relished by the best of men"

Stopped in Time

Little Willie, who for some months had always ended his evening prayer with "Please send me a baby brother," announced to his mother that he was tired of praying for what he did not get, and that he did not helieve God had any more little boys to send.

Not long afterward he was carried into his mother's room very early in the morning to see his twin brothers, who had arrived during the night. Willie looked at the two babies critically and then remarked: "It's a good thing I stopped praying when I did."

An Eye for Business

A Scotchman came upon an automobile overturned at a railroad crossing. Beside it lay a man, all smashed up. "Get a doctor!" he moaned.

"Did the train hit you?" asked the Scotchman.

"Yes, yes; get a doctor."

"Has the claim agent been here yet?"

"No, not yet; but please won't you get a doctor?"

"Move over, you," said the Scot, "I'm going to lie down beside you."

Not Far

BIG MAN (with extra big feet and a grouch): Say, will you be so kind as to get off my feet?

LITTLE MAN: I'll try, sir. Is it much of a walk?

No Argument

A returned missionary tells the story of how in Darkest Africa two natives were watching a leopard chasing a very large and very fat white man.

Said one native to the other: "Can you spot the winner?"

"The winner is spotted," replied the other African.

Before and After

Conversation of an engaged couple:

"Why are the stars so dim?" she murmured.

"Because your eyes are so bright," he whispered.

Conversation of same couple married:

"I wonder how many telegraph poles it would take to reach from here to the stars?" she mused.

"One, if it were long enough. Why don't you talk sense?"

Badly Scared

Two brothers, Julius and William, but commonly called Jule and Bill, were in the same class. On the first morning of the new teacher's régime every pupil was called upon to give his name. The older of the two brothers gave his first—"Jule Clark."

"'No abbreviations, please—the whole name," said the teacher, severely.

"Julius Clark."

"And you?" she queried of bashful little William. He was frightened out of his boots by her newness and her severity.

"B-billious Clark," he stammered.

Fair Exchange

The fighting had been going on all day, but toward evening the enemy seemed to have had enough. About this time a lieutenant burst into the dugout where a number of officers were gathered. Saluting, he addressed his captain: "The Germans are waving a flag of truce, sir."

"Well, what do they want?"

"They would like to exchange a couple of privates for a can of beans."

Familiar Surroundings

Dairymen are always subject to the slander of jokes. For instance, this paragraph:

"If it be true that in conscription the men are going to be put at the war tasks that their occupation in peace time have best fitted them, why not put the dairymen in the navy?"

No Outsiders Allowed

"Uncle Remus, you may have a lawyer appointed to defend you if you wish," the judge told the old negro who was accused of chicken-stealing.

"No, suh; thank you, Jedge. Ah intends to enjoy them chickens all mahself," and he plead his own case.

We Don't Doubt It

An Irishman suffered from a stomach ailment. The doctor was called in, and on his second visit questioned his patient.

"Have you been drinking hot water an hour before each meal, as I directed? If so, how do you feel now?"

"Doc," said Pat, "I tried hard to do it, but I had to quit. I drank for thirty-five minutes, and it made me feel like a balloon."

Just Jabs

"I don't believe in signs," says Uncle Ned; "leastways, not when they're plastered all over folks' barns."

Mother says that just because a man loves the soil is no reason for his bringing a lot of it into the house.

A hen can hatch an egg just by sitting, but people don't hatch successful ideas that way.

Choir camouflage: Mr. Basso, the new druggist, aged fifty-one, on the left, and Miss Alto, the dressmaker, aged forty-two, on the right, who have been keeping company for three months, think they are fooling the congregation.

Automobiles

An Elusive Battery Trouble

By Ed Henry

A FARMER owned and drove a late-model automobile which suddenly developed battery trouble, making it necessary to remove and recharge the battery. Apparently there was a leak somewhere in the electrical system. The wires and connections were gone over carefully for worn insulation or broken places, but none could be found. Everything seemed in good condition and no trace of a leak could be located. Still the trouble continued, and in desperation the owner was on the verge of tear-

Making a quick trip to market à la truck

ing out the old wiring system and replacing it with new, with the hope of thus blindly removing the trouble, when suddenly the battery became as efficient as ever. The puzzle seemed beyond solution until the farmer's youthful son remarked:

"Say, Dad, I believe it was that spotlight that made all the mischief. Before we had it the battery gave us no trouble, and since the light got broken and we sent it away for repairs the battery hasn't troubled either."

This set the father to thinking, and he came to the conclusion that what his son had said might be true. He liked lots of light when driving at night, and had been in the habit of burning the headlights, spotlight, and other lights on his car when operating it after dark, and perhaps this was too much of a drain on the battery. Inquiry at a service station confirmed him in his belief. Therefore, after the spotlight was repaired and installed again he was careful not to burn it and his headlights at full power for any length of time, and in consequence no further battery exhaustion was experienced.

On the average car the dynamo and electric system are designed amply to

After the dishes are done

care for the regular equipment, therefore any added electric equipment should be used sparingly and the battery discharge watched so that no injury results. Especially does this apply to the electric heating devices, some of which are designed to keep the driver's hands comfortable, others to heat the gasoline mixture during cold weather. These or the spotlights are not to be condemned for this reason, but they should be used only when necessary, and then with judgment, even on cars that have no storage battery, and that draw the current from the magneto.

It pays to keep watch of the lights on any automobile, so that none are burned needlessly. Especially is this wise when the car is left standing on the highway at night. A strong, fully charged battery makes for economical automobile operation, and if unnecessary use of the electric current is guarded against it will aid in keeping the battery in this desirable state.

OWNERS now realize that this car actually does outstrip even previous Hupmobiles in performance.

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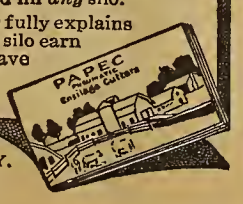

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Hun Handiwork

Photograph by Brown Brothers

THIS most remarkable photograph shows that terrible world-hated snake—the Hun Army—gliding rapidly through Brussels in the early days of the war on its way to strike France in the back. That part of Belgium and France now occupied by the Huns suffers as no country ever suffered under pestilence, famine, or flood.

Copyright by Underwood & Underwood, N. Y.

SMOKING ruins were all that was left of this French hospital near the American sector, after a Boche airman had dropped a bomb on it.

Photograph by Central News Photo Service

NO, THIS isn't a photograph of slaves being led to market more than half a century ago. It's a recent photograph taken from a captured German officer in East Africa, and shows the freedom enjoyed by the Kaiser's African subjects.

Copyright by Underwood & Underwood, N. Y.

AS THE Germans are driven out of a French town, allied engineers rush in and begin repairing the havoc wrought by the Huns. Here we have a good idea of what may happen to our own homes if the Hun is not checked "over there."

Photograph by Brown Brothers

THE Huns [illegible] any distinction [illegible] men and children. [illegible] and her baby were [illegible] red by a bomb dropped [illegible] Hun Zeppelin during [illegible] London.

Photograph by Brown Brothers

YOU might run upon this scene in most any of our own cities. Wouldn't you immediately guess "fire"? Yes, there has been fire, but it wasn't caused by a defective flue; it was caused by the Hun's defective idea of Kultur—bombs dropped from a Zeppelin.

Copyright by Underwood & Underwood, N. Y.

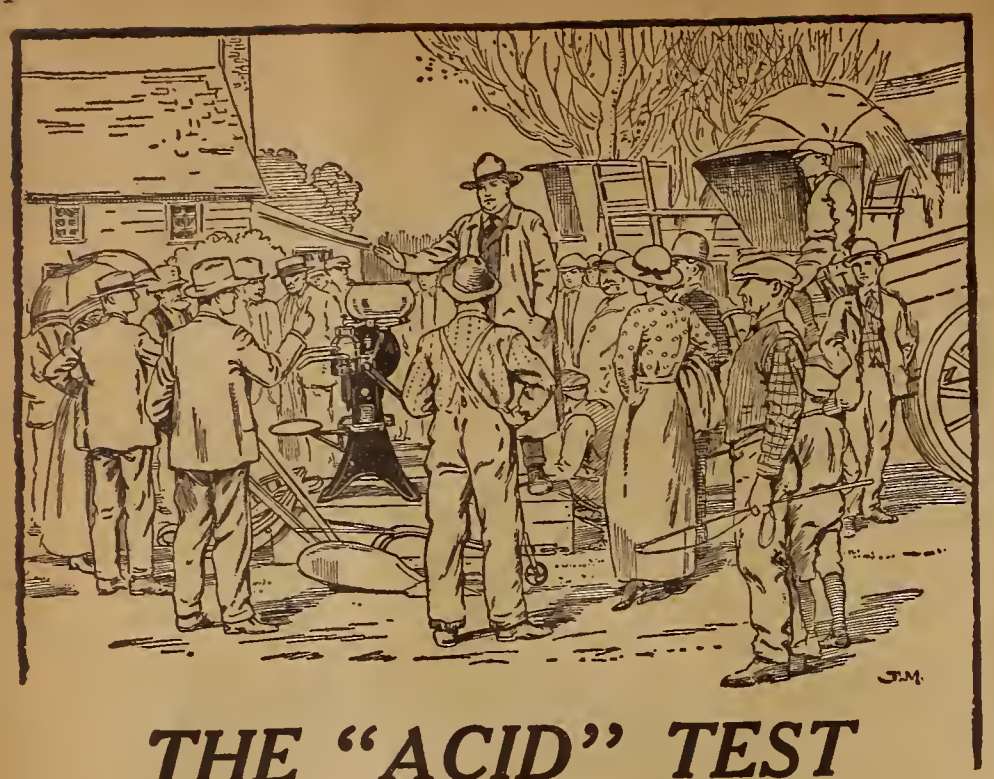
AFTER a day and a night in icy waters, these men, sole survivors of a ship torpedoed without warning by a U-boat, were picked up by a passing vessel. The Kaiser's order, "Leave no traces," was almost carried out.

Copyright by Underwood & Underwood, N. Y.

BERLIN boasts that one of her U-boats torpedoed the Gloucester Castle, a British hospital ship. Somehow, attacking a defenseless vessel, laden with wounded, and bravery do not coincide in our minds. Thanks to the work of the officers on board, all of the wounded were safely removed. This is the sort of cowardly work that wins the iron cross for German commanders.

Photograph by Brown Brothers

WHEN the war first started, the Germans made the picturesque French châteaux their headquarters. They not only broke into the wine cellars, destroyed furnishings, but also murdered the owners and their young sons and raped their wives and daughters. When this picture was snapped the debauch of these German officers had reached the stage where the most drunken has his face painted by the least drunk. This photograph was taken from a captured Hun officer. Photographs such as this will be damaging evidence against the Huns at the peace conference.



THE "ACID" TEST OF VALUE

At an auction sale the buyer makes the price.

Auction prices are apt to be lower than the real value warrants, rather than higher.

In any case, auction prices represent the estimate of value placed on the article by the buyer and not the seller.

During the past few months, the cow owner's appreciation of the unusual values offered in De Laval Cream Separators has been demonstrated in a most remarkable way.

From one state after another have come reports of the sale of De Laval machines at farm auctions—machines which had been in steady use for several years—at prices, in most cases, only two or three dollars less than the sale price when new; sometimes at practically the same price at which the machine was sold when new; and, in several instances, at even more than the original list price.

In February, at a Missouri auction sale, a De Laval in use two years was sold for $1.25 above the original purchase price. In Kentucky a farmer paid for a De Laval $2.00 more than the original price, at an auction sale. Last January, in West Virginia, a second-hand De Laval sold at auction for $2.50 less than the original catalog price. On January 15th, in Ohio, a De Laval machine in use a year was sold at auction for exactly the same price it brought when new, and at another point in Ohio a De Laval in use several months brought several dollars more at auction than the original list price. In the province of Ontario, early in April, a De Laval in use since 1916 brought at auction a price $5.00 higher than the owner paid for it when new.

In contrast with these prices paid for De Lavals at farm auctions, it is interesting to note that when other makes of cream separators are offered they are usually listed simply as a "cream separator," and not by name. Often there is no bid for such machines and their usual auction prices run from $10 to $15. We have never heard of one that sold at auction for half its original cost.

Perhaps you may not have had an opportunity to learn of the cleaner skimming, easier turning, the great durability and the splendid service given by the De Laval machines, but here is the strongest and best sort of evidence that those who do know cream separators appreciate that the man who buys a De Laval gets good and generous value for the purchase price. And further, that even after a De Laval has been several years in use, it is practically as good as new.

If you are without a cream separator or in need of a new or better one, why not see the local De Laval agent immediately? If you don't know him, address the nearest De Laval office as below, for any desired particulars.

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Dairying

Value of a Summer Silo

By Fred T. MacFeely

MOST persons are fully aware of the merits of a silo for winter use, but I have found that a silo will pay me as much in the summer as in the winter. During these days of high-priced feed it has become an absolute necessity, and I have learned that it is very expensive to use $200 per acre land for pasture when I can raise five times as much grain on the same land.

I have also learned that my cattle do much better on silage feed than on pasture-grazing. This fact is very apparent during the summer months, when the milk supply usually falls below normal. At one time I thought that green corn or some other green feed would do just as well as silage, but last fall I experimented with this theory, and the experiment proved to be quite costly. It taught me a lesson and I now have two silos, one for summer and one for winter use.

There is no doubt but that a summer silo is a paying investment, and I would advise any farmer who has none to build one, even if the money must be borrowed. It will pay many times over. As to the size, I will say that I usually have 20 head of cattle in the summer, which are well taken care of with a silo 12 feet in diameter and 30 feet high.

The Grass Season

By Dr. A. S. Alexander

DAIRYMEN rejoice when at last comes the green grass season of the year, when heavy hand-feeding may be discontinued and the happy cows luxuriate upon pasture. They notice now that the milk has increased materially in amount, lost much of its winter blueness, and assumed a yellower, richer tint. They smile with satisfaction on account of these things and because they know that grass is cheap, and so they figure that, for once, the cows now are more than paying for their feed.

But there is another side to this pleasant picture, and one that seems to be little understood. It is the fact that green grass often acts more as a stimulant than an actual feed. That, we think, invariably is its tendency during

The answer to wheatless and meatless days

the first weeks of pasturing when grass is lush and laxative. It very freely relaxes the bowels and incidentally causes a sudden release and utilization of a hoard of nutrient matter which the cow has stored in her tissues during winter. She simply unlocks her reserve supplies of nutrients and energy and draws lavishly upon them until such time as grass matures, loses its active laxative properties, and serves as adequate sustenance for all of the needs of the body.

If ample supplies of riper grass, forage, and grains or meals are not then available, the cow inevitably faces a starvation period after the feast of good things she has for a brief time enjoyed when green grass set it free. She now must have extra feed or her milk secretion will dry up and her body emaciate. Heat, flies, and drying up of grass unite in this debilitating process, and generous supplementary feeding is necessary.

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Live Stock

Horses in War

By Col. Henry J. Reilly

THERE seems to be a rapidly increasing opinion that the day of the horse in war has passed. The nearly four years of warfare in Europe has shown this to be an entirely erroneous idea.

On the Western front, where the road system is probably the best in the world, mechanical traction has not been able to displace the horse. In general, it might be said that the line between mechanical and horse traction on a battlefield is the extreme limit of the enemies' artillery fire when any heavy action is going on. The horse is used on the battlefield and the mechanical traction in the rear of it.

Of course, during calm periods mechanical traction is used along the rear part of the battlefield. There are various reasons for this division. Probably

A car that has been disinfected before stock is shipped in it

the main one is that batteries frequently must be placed and supplied in positions some distance from a road.

If the army is operating on conquered ground, this ground generally is so cut up with old trenches and shell holes that horse traction, and only horse traction, is practicable. Frequently the mud is so deep that mechanical traction is helpless. In many cases no wheeled carriages of any kind can move. In such cases pack animals have to be used.

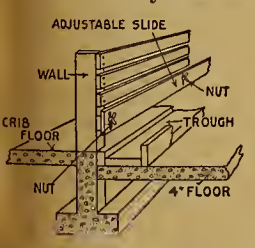
So well are these conditions recognized that, in spite of the tremendous weights of heavy artillery material and the slowness and difficulty of moving them by horse traction, it is considered that only half the heavy batteries should have mechanical traction.

An army must still have animals for all its cavalry, the usefulness of which is far from disappearing; it must have horses for all its light field artillery, half its heavy field artillery, and all its regimental and divisional supply trains.

Incidentally, every regiment of infantry must have several hundred horses and mules. The more the question is examined, the more two facts stand out. The first is that certain work in modern warfare can only be done by horses. The second is that the number of horses needed for armies which are counted by the millions must be counted by the hundreds of thousands.

Adjustable Self-Feeder

By Deane G. Carter



THE sketch shows a method of self-feeding hogs used for several years by a Marshall County, Iowa, farmer.

The bottom board was removed from the corncrib and an adjustable slide substituted. This slide is made by cutting slots every two feet in an eight-inch board. It is set to give the desired opening, and clamped in place by winged nuts and washers.

It is necessary to look at the feeder only once a day to make sure that the right amount of corn is being supplied. The shallow trough and the feeding floor, eight feet wide, prevent a waste of grain and keep the feeding space clean.

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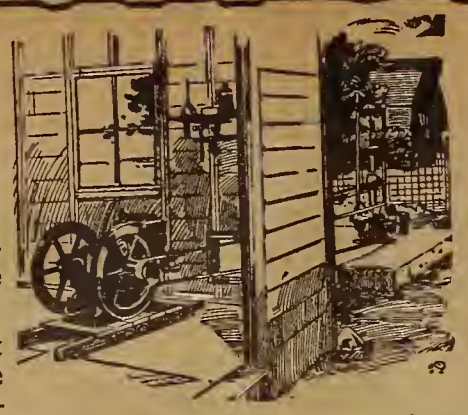

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CHICAGO U S A

Champion Deering McCormick Milwaukee Osborne

Machinery

Starting the Gas Engine

By H. C. McCormick

MANY people have difficulty in starting and operating gas engines, particularly the stationary farm engine. In many cases they fail to get their engine ready so that it can go before they begin to turn it. I very seldom have occasion to turn my stationary gas engine over more than once or twice until it starts ready for business.

Nearly all engine trouble is caused by the ignition system, which is easily understood if studied. There are just three things to make sure of: if we have the gas, a good spark, and good compression the engine must start. By this I do not mean simply that you have gas in your tank, but that you must know that it gets where the engine can use it.

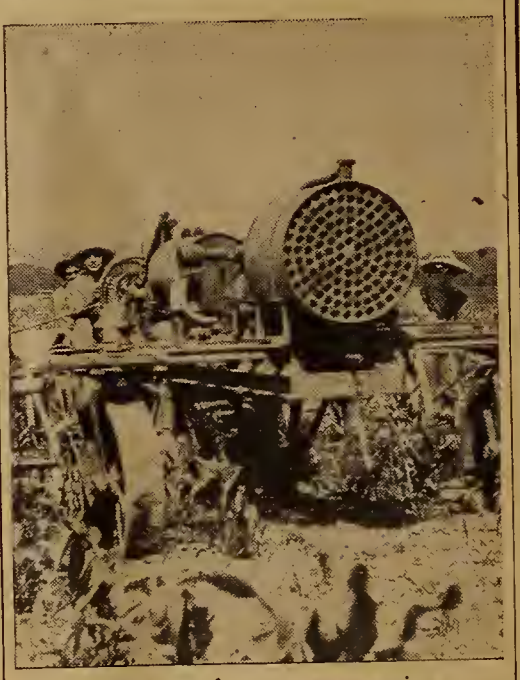
For instance: If your engine is cold it may either have to be primed or the needle valve may need to be opened an extra turn, or a little dirt in the carburetor will necessitate the opening of the needle valve another turn. You must close it again after the engine starts.

Again, when the engine is hot, priming or extra opening of the needle valve will cause flooding. If these things are attended to properly and the engine fails to start promptly after three or four turns, you may as well begin to look for the trouble. Do not, however, tear the engine all to pieces the first thing, as you are not likely to have to go very deep. It is usually the little things that are responsible for most of the engine troubles, and the successful engineer will attend first to all minor details, the chances being that the major troubles will not materialize.

License to Buy Powder

RECENTLY Congress passed a law requiring all users of and all dealers in explosives to take out a government license. This has created the false impression that the Government wants to restrict the use of explosives, which is not the case. The main reason and object of the law is to keep these dangerous materials out of the hands of plotters and alien enemies of the country.

Through the misunderstanding of this measure, many dealers and customers have discontinued the handling and use



Cultivating four rows at a time

of farm powder for agricultural purposes. This is not what the federal authorities wish to happen, as explosives have proved themselves necessary to agriculture in many States, and can be put to good use in our present program of speeding up production.

The matter of a license is very simple. The U. S. Bureau of Mines, Washington, D. C., has charge of the appointment of agents from whom the license can be secured. All that is necessary to do to secure these appointments is to write to F. S. Peabody, Bureau of Mines, Washington, and suggest the name of a notary public or justice of the peace of your acquaintance, and ask that he be appointed to issue such license. A license costs 25 cents.

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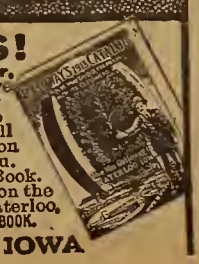

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A Photo taken of one of the 47 Fields established in 1915 by F. Forbell, Alfalfa Specialist in Minnesota College of Agriculture. On these fields Liscomb Alfalfa was sown along side of Lyman's Grimm. During the following winter most of the Liscomb, touted by some seedsmen as being very hardy, winterkilled—but the Grimm came through the winter in excellent shape, as is shown by the above photo.

The same success with Lyman's Grimm has been met with all over the country.

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In establishing your Alfalfa field, sow Grimm Seed which is known to be genuine. With each lot of my seed I furnish a certificate of its genuineness. I specialize in Grimm Alfalfa only. Book, "How I discovered the Grimm Alfalfa" and seed sample Free.

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Poultry

The Chicken-Dinner Route

By J. L. Graff

SOME days ago I came across a new "wrinkle" in the chicken business which is bringing good financial returns to Mr. C. W. Hocking, a Racine County, Wisconsin, poultry keeper. After giving some study to the matter of chicken dinners, Mr. Hocking decided there were plenty of automobile owners within easy riding distance of his little farm who would like to be able to get freshly killed, perfectly fattened and dressed chickens, ducks, and geese for home dinners, family parties, and other occasions to insure him a good business in selling these chicken dinners. His little farm is located at a point where several excellent highways intersect within less than a dozen miles of several good-sized towns.

His plan of procedure is to raise sufficient broilers, friers, roasters, and fricassé-stock so that he may always suit

Who says Leghorns are wild?

and accommodate his trade. He has provided himself with a full equipment, including a clean, sanitary, well-screened killing and dressing house, which contains a large refrigerator and handy containers in which chicken dinners can be packed in ice, if need be, and carried as far as desired, even in hot weather. So proficient has Mr. Hocking become in his business that he can kill and dress a bird in a very few minutes, while the joy-riders rest under his tempting shade trees.

Meatless days are giving Mr. Hocking's business a pronounced boost, and he is looking forward to selling from $2,000 to $3,000 worth of chicken dinners the present year.

Community Caponizers

AN IMPORTANT suggestion comes from a Missouri poultry woman, Mrs. H. O. Spickerman, a subscriber to FARM AND FIRESIDE, which is that in each neighborhood someone should prepare himself to be an expert caponizer, and secure many jobs from those who prefer to make a fair payment rather than try to do the work themselves. Where only a dozen or a score or two of cockerels are to be caponized each year, a poultryman can hardly keep in practice, and would rather pay a fair price to have the work done by an expert.

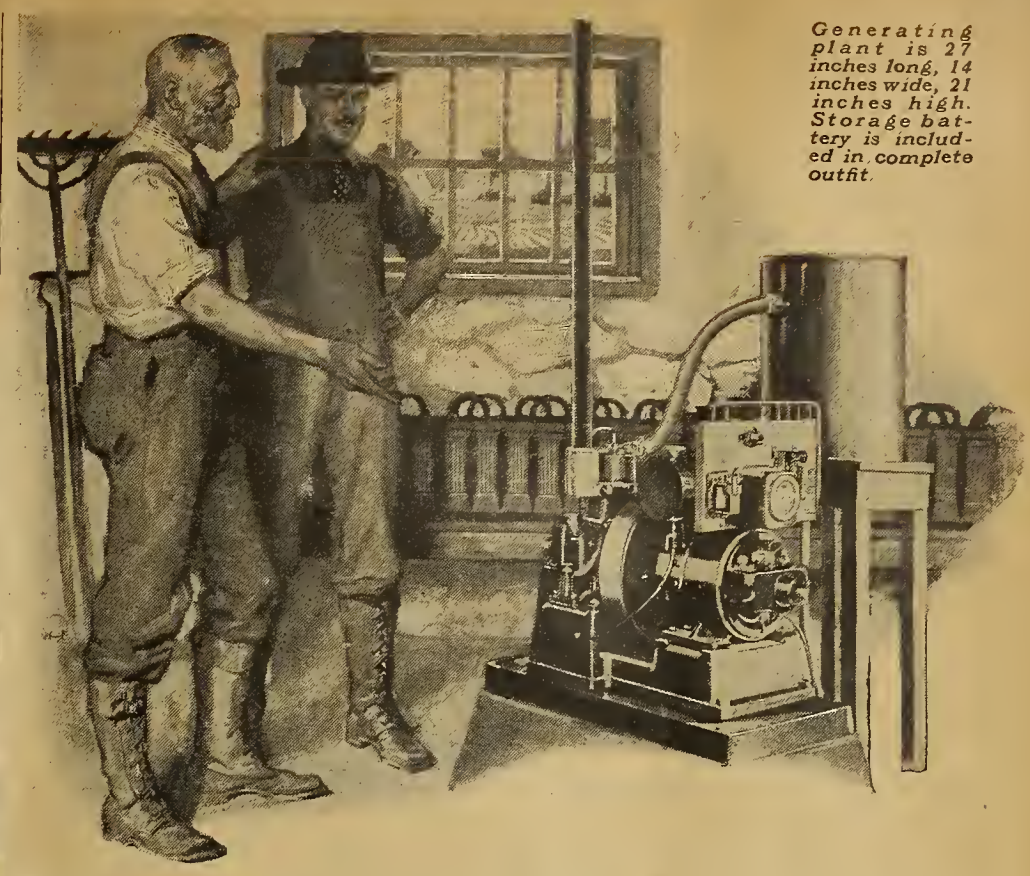
How many neighborhoods already have such community caponizers?

Present Hen-Feeding Costs

DURING March, 1918, the cost of feeding 260 hens of 15 breeds and varieties in the laying contest now in progress at Mountain Grove, Missouri, averaged 21 cents a hen, or .7 of one cent per day. For the first five months of the contest the total cost was $1.02 a hen.

The average receipts from the eggs laid and sold for each of the 260 hens was 62 cents in March and $2.45 for the first five months of the contest. The eggs from the best pen of five hens sold for $18.06 for the five-months period mentioned, which left a return above the cost of feed of $12.96 for the five hens, or $2.59 a hen.

There were 15 pens in the contest that laid $15 worth of eggs or over during the first five months of the present contest, or a gross average income of $1 for each hen of 15 pens for the five winter months.



Generating plant is 27 inches long, 14 inches wide, 21 inches high. Storage battery is included in complete outfit.

Recommended by Its Owners

Lalley-Light, the farm electric light and power plant, gets its strongest recommendation from farmers and others who own and use it.

Distributors and dealers are able almost always to refer a prospective purchaser to a Lalley-Light user.

In every such case, experience has shown that the report is the same—complete satisfaction.

We do not record this fact in a spirit of pride—though we are proud of it—but for your guidance and information.

We feel that the good word of an owner carries greater conviction with you than the good we speak of Lalley-Light.

If you do trouble to inquire, you will find Lalley-Light spoken of for its faithfulness and its low cost of operation.

You will hear that it runs for months, and even years, without a hint of trouble, breakdown or repairs.

You will learn that it is absolutely safe; that it actually does save valuable time and labor, itself requiring but little care and attention; and that no owner would willingly give up the comforts and conveniences it has brought to him and his family.

It is because of these things—established by more than seven years of successful farm use—that Lalley-Light is preferred by more and more electric light plant buyers.

If you will write us, we will mail complete information, price of plant delivered, and name of our nearest dealer where you can see Lalley-Light in operation.

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"Always runs and runs right"

Auto-Fedan Hay Press

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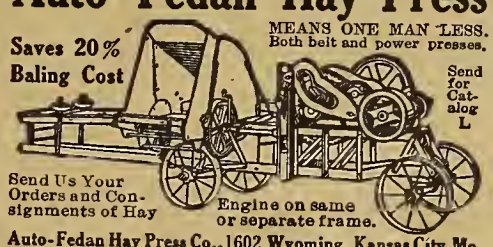

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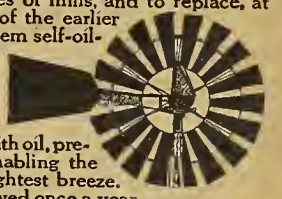
has become so popular in its first three years that thousands have been called for to replace, on their old towers, other makes of mills, and to replace, at small cost, the gearing of the earlier Aermotors, making them self-oiling. Its enclosed motor keeps in the oil and keeps out dust and rain. The Splash Oiling System constantly floods every bearing with oil, preventing wear and enabling the mill to pump in the lightest breeze. The oil supply is renewed once a year. Double Gears are used, each carrying half the load.



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You Can Get a Homestead of 160 Acres FREE

or other lands at very low prices. Where you **can buy good farm land at $15. to $30. per acre** that will raise **20 to 45 bushels of $2. wheat to the acre**—it's easy to become prosperous. Canadian farmers also grow wonderful crops of **Oats, Barley and Flax. Mixed Farming** is fully as profitable an industry as grain raising. The excellent grasses, full of nutrition, are the only food required either for beef or dairy purposes. Good schools and churches, markets convenient, climate excellent. Write for literature and particulars as to reduced railway rates to Supt. Immigration, Ottawa, Can., or to

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Feathering Our Nest

Tom and I preferred modern appliances to all new furnishings, so I had little money for frills, but work and ideas helped us make the new home attractive and comfortable

By Elizabeth Anthony

TOM and I are to be married the last of this month, so we are busy remodeling the old house on the farm in which his mother used to live. The house itself is old, but well built. As Tom thinks that most of our money should be spent in modern conveniences, such as plumbing, electric lights, and appliances which will make my work easier, I have had only a small amount to buy the things I need to make the house attractive, bright, and cheerful—the little things a woman likes and which make her house a home.

After all the main necessities were installed, I found that I could buy only the most needed pieces of furniture. These I would select of the kind which would last a lifetime, and plan to replace gradually the makeshifts which I should have to use at first to "fill in."

I made a list of the principal things for the house in general, such as wall paper, curtains, and rugs. The woodwork was painted white throughout the house, and the floors a dark gray-green. I selected an inexpensive wall paper, the color which the wall-paper man called colonial yellow, and put it on all the walls down-stairs, except the kitchen.

I made dotted-swiss curtains with saucy little ruffles for every window in the house. This gave the windows a uniform appearance from the outside, and they were very bright and neat on the inside. I found, too, that if I bought many yards of the same material it would be much cheaper than to buy something different for each room. Then, in the rooms where I wanted variety and color, I could use side curtains of cretonne.

The last general thing, which was no small item, was rugs. I had only one large rug to begin with, so I decided that the best thing to do was to use rag rugs in the rest of the house. I took the old pieces of carpet and rags I had and a few new rags to the carpet weaver.

At first it seemed as if nothing worth while could come of them, but I selected the darker rags and strips of carpet for the rugs down-stairs, and had them woven together with dark green thread. The lighter rags were woven with pink or cream colored thread for the bedrooms. As rag rugs wash well and easily, the light colors were practical and looked dainty in the sunny bedrooms.

"I got the idea for my dining-room from this one, which I saw last summer. I admired it because of its simplicity and cheerfulness"

After these general items were settled I began to work on the separate rooms. My living-room came first. It was a fairly large bright room, with a brick fireplace for burning wood. The foundation of white woodwork, dark green floor and rugs, soft yellow walls, and white swiss curtains gave me a chance to use a great deal of bright-colored cretonne, of which there are so many attractive patterns on the market. I selected one which had a background almost the color of my walls, with foliage and birds in a very large design all over it. I made simple side curtains for the windows and covered many pillows, saving enough cretonne for odd chairs, cushions, and lamp shades.

I wanted the fireplace to be made the main feature of the room, so I grouped my largest pieces of furniture around it. I figured that I would have enough money to buy a davenport, a comfortable chair for me to sew in, and a small table for my sewing. This didn't seem very much, so I knew that I should have to "fill in" with old pieces which were stored in the attic. I bought a large, comfortable davenport, which I had upholstered in a two-toned green denim. This quite broke one neighbor's heart, for she insisted that the foliage tapestries were "just the thing."

At the same time I bought a very comfortable large, low chair of the same style as the davenport, and had it upholstered in the same material. The wood frames of the two pieces were of mahogany, which looked very well with the white woodwork.

When it came to selecting the table, which I knew would have to hold everything from Tom's pipe to my sewing, I grew distracted, for the ones which were large enough were so expensive. I finally found a small, low gate-leg table of mahogany. It was round and would look very well beside my chair.

In arranging the furniture I knew that if I kept all the rugs and furniture parallel with the walls of the room it would be very restful in effect, though at first this looked rather stiff. I placed the davenport in front of the fireplace, my chair by the window which had the prettiest view, and the gate-leg table to the right of the chair. This allowed the light from the window to come over my left shoulder when I was sewing.

Where would I ever get enough small pieces to put around the room until I could afford to buy other chairs and a large table to put back of the davenport? The attic and woodshed were full of old furniture which Tom's mother had left and which he designated as "junk." After studying it, however, I found that there were a few really fine old pieces. I knew that a little paint would do wonders, so I set to work.

There was a round table which I had the carpenter cut in two and on each half put a third leg. These I painted green, a little lighter than the upholstery on the davenport. I put one at each end of the davenport, and on them I put two little mahogany candlesticks which I had bought for $1.50 apiece, and painted the same green as the tables. Then I made shades for them of the pattern which had the brightest colors.

I found four little odd chairs which I painted green, and made the seats of the cretonne. I knew that if I were careful in placing the larger pieces of furniture in regard to light and the parts of the room which were most comfortable, all little odd candlesticks, flower vases, and books would take care of themselves.

The hall was very simple, its greatest convenience was a closet under the stairs, where I put many hooks on which to hang all hats and coats, and a shelf for overshoes. The only furniture in the hall was a small table against the wall, with an old mirror over it. On the table I put an old brass candlestick and an old blue china bowl for flowers.

I got the idea for my dining-room from one I saw last summer. I admired it because of its simplicity and cheerfulness. In my dining-room I put my new sideboard, table and chairs, and my one big rug. My china was blue with tiny pink rosebuds on it, so I selected a cretonne which was almost all blue with a little rose in it. The pattern was large and the colors fairly dark, so that these color combinations did not make the cretonne look as if it were designed for a bedroom. This I hung at the windows, strips at the sides and a narrow, full-gathered valance at the top.

I was very proud of my large, convenient kitchen. As it was going to be my own domain, I wanted it attractive as well as convenient, so I made little blue and white checked gingham curtains for the windows, a gingham cushion for my chair, and a gingham ruffle around the electric light, which hung from the center of the ceiling. Then I placed some pots of red geraniums in blue-painted pots on the window sills. The walls and ceiling were tinted in buff. I preferred tint because it could be renewed frequently at small expense.

The up-stairs had to be very simple, so I decided to use the third bedroom for a store-room and sewing-room, and only use the other two bedrooms in the beginning, one for a guest-room, and the one which adjoined the bathroom for our own.

Our room was the one over the living-room, so it was large and sunny. How could I make so large a room warm and comfortable without buying a lot of furniture? I knew that a figured wall paper would help, so I selected one which had very soft colors, dull green foliage, and faded-looking pink and blue roses. The pattern was so large and the colors so dull that the effect was very pleasing—not in the least hard. My white swiss curtains were the only ones at the windows, and I used my rag rugs on the floor.

After I placed the big four-poster bed, chest of drawers, and little old wash-stand, which I had converted into a table, I found that I needed more color and warmth. Yet I didn't want cretonne on account of the figured wall paper, and I did not want the expense of other curtains at the windows. So I bought yards of rose-colored gingham, made of it a ruffle and cover for the bed, covered a window seat, and made all my electric light shades, covered an old kitchen table and used it as a dressing table, and made slip covers for two little chairs. I bought a few pillows, covered them with gingham of every color which was in the wall paper, and put them every place in the room that a pillow could be put. The whole effect of the room was very pretty and fresh.

My guest-room was quite a different proposition, as it was small and I did not want to buy any furniture. The wall I tinted a plain cream color. I used an old bed, dresser, and two chairs all painted Alice blue and tried my hand at stenciling the furniture with old paint. I bought a stencil of a pretty flower design and put it on the rails of the bed, arms of the chairs, on top of the dresser, and the front of the drawers. I didn't attempt to do the stencil with different colors, just made all the design in blue, a little darker than the main part of the furniture.

For the windows, cushions, and bed cover, I found a thin "sun-fast" material which had a very wide blue and cream-colored stripe. For my electric lights I made simple little silk shades of yellow. The rag rugs in this room were woven with a pale yellow thread.

After I finished the house, I wanted some place to work, eat, and play out of doors. My back porch joined my kitchen and spring house. Tom enlarged one end of it for me, and screened it all in. I painted a table and a few nondescript chairs all dull blue, made a porch swing from an old bed spring, hung by four chains from the ceiling, covered the mattress with a blue cretonne which had orange flowers in it, and made some pillows of the same material.

I took some tomato cans, flattened one side, and put a hole near the top of the flat side. These I painted blue, the color of the furniture, and hung on the walls wherever there was a space. I shall keep these full of nasturtiums all summer.

The Health of "Two Generations" benefited by the use of Nujol

Mother and child *both* profit from a mother's use of Nujol during the nursing period:—

NUJOL LABORATORIES,
STANDARD OIL CO. (New Jersey)
BAYONNE, N. J.

Dear Sir:—

Because of the fact that it was necessary for my wife to take medicine for constipation while nursing our first two children, they both suffered and were pale and cross until old enough to eat for themselves. When the same trouble began with our third child, our physician said that there was no laxative medicine for my wife that would not hurt the baby. I then persuaded my wife to try Nujol, as I had successfully used it. It relieved her without affecting the baby; as a result we have the healthiest, happiest child you ever saw.

Signed,
(Name and address sent on request.)

This is one of the testimonials from hundreds of users who use Nujol to insure normal bowel-habits, and who then share their abundant health with their babies. It is healing; it is effective; it brings about thorough and regular bowel habits, yet contains no drugs, whatsoever.

ABSOLUTELY HARMLESS

There are no substitutes—there is *only* Nujol

All drug stores in U. S. and Canada. In bottles only bearing Nujol trademark. Never in bulk. Send 50c and we will ship new kit size to U. S. soldiers and sailors anywhere. Write for booklet free.

Nujol *for constipation*

"Regular as Clockwork"

Good-Health Talks

By David E. Spahr, M. D.

A MOTHER who has five children suffering with earache has asked me what she can do for it. External earache is caused by washing in cold water, picking the ear with the finger nail or hairpins, while disease of the middle ear is caused by extension of catarrh of the nose, enlarged tonsils, and adenoids.

You can't be too careful what you put into your child's ear. A mother made nervous by the screams of her child, will often resort to desperate means to soothe the pain. A hot-water bottle applied to the ear is a great help. It isn't advisable to use laudanum. A safe and harmless remedy is oil of cajeput, one dram, oil of sweet almonds, one dram. Mix, and drop from two to four drops in the ear as often as required.

If there is a discharge of pus from the ear, wash it out gently with equal parts of peroxide of hydrogen and warm water. Where there is disease of the middle ear, diseased tonsils and adenoids should be removed and the nasal catarrh cured.

Nettle Rash

What cure is effective for nettle rash?
L. W. D., Delaware.

CORRECT faulty digestion by taking an aloin pill at night and five to ten drops of dilute hydrochloric acid after meals in a glass of water. For local application use the following: Pulverized camphor, one-half dram; aqua ammonia, one dram; extract hamamelis, ad. three ounces. Mix well, and apply to the itching parts.

Heartburn

What is good for heartburn?
H. M. S., Kansas.

TAKE from three to five soda-mint tablets after meals.

Face Sore After Shaving

For several hours after I shave my face burns and smarts. What can I apply to relieve this trouble?
G. W. M., Missouri.

USE bay rum and witch hazel, equal parts, or cold cream as a local application.

Bleeding from the Nose

How can bleeding from the nose best be checked? *C. W. R., Arizona.*

BY CLEANSING the nostrils and the bleeding point located and touched with caustic or the galvanocautery. Antipyrine in a ten per cent solution or strong alum water applied is efficacious. If this fails, the nose should be plugged, both posteriorly and interiorly, with pledgets of absorbent cotton saturated with alum water.

Pyorrhea

I have Rigg's disease of the gums. It is quite a severe case. What can I do for it? *L. T., Ohio.*

MASSAGE the spongy and bleeding gums with the finger in preference to a tooth brush, using milk of magnesia, or any antiseptic mouth wash. Then take a five-grain tablet of magnesium salicylate every three hours until the soreness is gone. Then three times daily until cured.

Blood-Poisoning

What should be done to prevent blood-poisoning when a child runs a nail into his foot? *Mrs. T. Y., Montana.*

CLEAN the injury thoroughly, and see that the wound is open freely to the bottom, to prevent the harboring and breeding of germs, and apply carbolized vaseline as an antiseptic dressing and to keep the wound open. Be sure and clean all the dirt and rust out of the wound, and keep the foot clean and dry. Bandage loosely with cheesecloth. As the wound is usually in the bottom of the foot, it drains easily.

DELCO-LIGHT

Increases Farm Efficiency

Fifty thousand Delco-Light plants in operation on American farms are saving, at the most conservative estimate, an hour a day each—or over 18,000,000 work hours a year.

That is equal to an army of 60,000 men working ten hours a day for a full month.

Delco-Light is a complete electric light and power plant for farms and suburban homes.

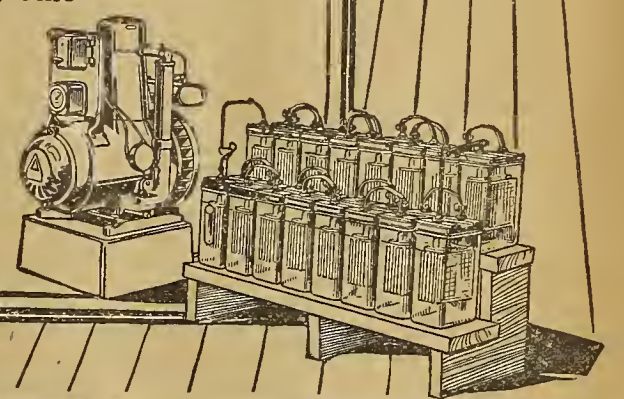
It furnishes an abundance of clean, safe, economical light, and operates pump, churn, cream separator, washing machine and other appliances.

Ask us to show you how Delco-Light can save time and money on your farm

The Domestic Engineering Company
Dayton, Ohio

Offices in all principal cities

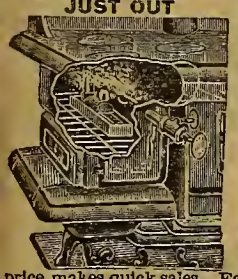
SELF CRANKING
AIR COOLED
THICK PLATE
LONG-LIVED
BATTERY
BALL BEARINGS
NO BELTS
USES KEROSENE



Cash for Old False Teeth Don't matter if broken. We pay up to $20.00 per set, also cash for old gold, silver, platinum, dental gold and old gold jewelry. Will send cash by return mail and will hold goods 10 days for sender's approval of our price. Mail to Mazer's Tooth Specialty, 2007 S. 5th St., Phila., Pa.

AGENTS—Only One in the World KEROSENE (Coal Oil) BURNER

JUST OUT



Fits in any cook-stove. Makes its own gas from Kerosene (coal oil). Gives every home a gas stove. Absolutely safe. Cheapest fuel known.

Wonderful Labor Saver

Agents just coining money. Women wild about it. No more coal or ashes to carry. No more danger from gasoline.

Safe, Clean, Odorless, Cheap

Every home a prospect. Low price makes quick sales. Easy to carry and demonstrate. Big profits. Your territory is open. Write today.

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$30 *for this genuine* **Victrola**

The same high quality and standard of excellence so well established and recognized in all Victor products.

Write to us for the handsome illustrated Victor catalogs, and the name and address of nearest Victor dealer.

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BROWN FENCE 150 Styles 21¢ Per Rod Up

150 Styles

Write for Greatest money saving fence bargain book ever printed. Brown fence is made of Heavy DOUBLE GALVANIZED Wire. **Resists rust longest.** Also Gates and Barb Wire. **Low Factory Prices. Freight Prepaid.** Write for free fence book and sample to test.

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Dept. 21 Cleveland, Ohio

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40 designs—all steel. Handsome, costs less than wood, more durable. We can save you money. Write for free catalog and special prices.

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427 North Street, Kokomo, Ind.

Get Cash For Your Empty Bags

Don't throw away a single bag—they're worth money to you. Prices are way up now. Cash in on all you have. But be sure you get our prices before you sell a single one. We guarantee most liberal grading. Over 20 years in business is your assurance of a square deal every time. We buy any quantity. Freight paid on all shipments to Werthan. Find out what real satisfaction is. Write quick, stating what you have. Address

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Lasting Service and Good Protection

from your farm buildings will be assured if you use Formed Metal Roofing and Siding Products. These sheets are carefully manufactured, highest in quality, and are strong, rigid, durable, and fireproof. It is to your interest to insist upon having only

Apollo

Full weight, Galvanized— *Manufactured with Keystone Copper Steel Base—* **Roofing and Siding Products**

APOLLO-KEYSTONE Copper Steel Galvanized Sheets are unequaled for Silos, Tanks, Culverts, Flumes, Cisterns, Roofing, Spouting, and all forms of exposed sheet metal work. Sold by weight by leading dealers. Supplied in Corrugated, V-Crimped, Standing Seam, and all standard patterns. Accept no substitute. Look for the stencil on every bundle—APOLLO on steel of regular analysis—with the KEYSTONE added when Keystone Copper Steel is used. Keystone Copper Steel possesses the highest degree of rust-resistance of any iron or steel product on the market to-day. Keystone Copper Steel Roofing Tin Plates are the highest quality plates produced for fine residences and public buildings. Our "Better Buildings" booklet is of great value to every farmer and owner of buildings, and will be sent free upon request.

AMERICAN SHEET AND TIN PLATE COMPANY, General Offices: Frick Bldg., Pittsburgh, Pa.

Westclox

SLEEP-METER of *Westclox* is a favorite for time around the house. *Westclox* alarms are double-duty clocks — practical, low-priced timekeepers as well as punctual alarms.

A better method of clock making is the reason for their success. All *Westclox*, like Big Ben, have needle-fine pivots of polished steel that greatly reduce friction. So all *Westclox* run on time and ring on time. The family name, *Westclox*, on the dial means this patented construction inside.

Sleep-Meter is five inches tall, has a cheerful-toned gong and an easily read dial. You'll want one of these clocks; more likely, *two*, — to tell time in several rooms of your home. And, maybe, another at your place of business.

See Sleep-Meter at your dealer's. Look for the family name — *Westclox* — on the dial. If your dealer cannot supply you, Sleep-Meter will be sent direct on receipt of price: $1.75; in Canada $2.50.

Western Clock Co.—*makers of Westclox*

Big Ben—Baby Ben—Pocket Ben—America—Lookout—Ironclad—Sleep-Meter—Bingo

La Salle, Illinois, U. S. A.

Sleep-Meter

A Westclox Alarm

"DON'T SHOUT"

"I hear you. I can hear now as well as anybody. 'How?' With the MORLEY PHONE. I've a pair in my ears now, but they are invisible. I would not know I had them in, myself, only that I hear all right.

"The Morley Phone for the

DEAF

is to the ears what glasses are to the eyes. Invisible, comfortable, weightless and harmless. Anyone can adjust it." Over one hundred thousand sold. Write for booklet and testimonials.

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Good CIDER

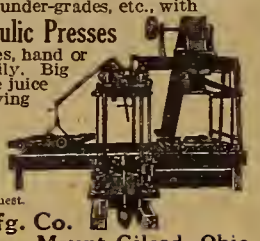
Always finds a ready market at big profits!

Cider Vinegar always commands the highest price.

Turn apple waste into profit by making good marketable cider from wind-falls, culls, under-grades, etc., with

Mount Gilead Hydraulic Presses

Fully guaranteed. All sizes, hand or power. 10 to 400 bbls. daily. Big money in cider, wine, grape juice and vinegar. Start a paying business that grows almost without effort.



Send for Catalog

We also make cider evaporators, apple-butter cookers, vinegar generators, cider and vinegar filters, etc. Full information on request.

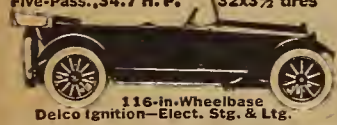
Hydraulic Press Mfg. Co.

106 Lincoln Ave. Mount Gilead, Ohio

Or Room 119 D, 39 Cortlandt St., New York, N. Y.

Shipped on Approval

Write at once for particulars of shipments and my 48-page catalo Agents wanted to drive and demonstrate the Bush Car. Opportunity to pay for it ont of your commissiona. Agents making money. Shipments are prompt. Bush cars guaranteed or money back. 1918models ready. Addr. J. H. Bosh, Pres. Dept. F-14



Five-Pass., 34.7 H. P. 32x3½ tires

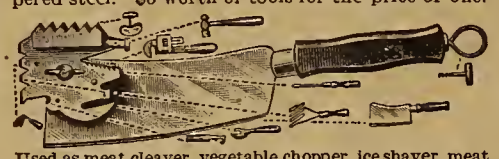
116-in. Wheelbase

Delco Ignition—Elect. Stg. & Ltg.

BUSH MOTOR COMPANY, Bosh Temple, Chicago, Illinois

AGENTS: $40 A WEEK

New low-priced 10 in 1 Kitchen Tool of finest tempered steel. $5 worth of tools for the price of one.



Used as meat cleaver, vegetable chopper, ice shaver, meat tenderer, cork screw, hammer, can opener, bottle opener, pipe wrench, screw driver. Easy seller—big profits—not sold in stores. Write quick for demonstrating sample.

Thomas Tool Co., 3746 Gay St., Dayton, Ohio

FARMS Dairy, grain, fruit, poultry. Hilltops, lake shores, ocean fronts. Stock, tools and crops often included to settle quickly. Write nearest office for complete Illustrated Catalogue of bargains in many states. E. A. STROUT FARM AGENCY, Dept. 2699, Boston, New York, Philadelphia, Chicago, Omaha.

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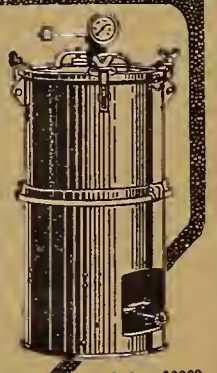
The National Aluminum Cooker and Canner—the same as used by County Agents and Home Demonstrators—enables housewives to save by cooking and canning with steam—makes delicious dishes from inexpensive cuts of meat. Easy to operate; nothing to get out of order. The only home cooker and canner having adjustable safety valve for maintaining correct cooking pressure at all times. Send for our Canning Book.



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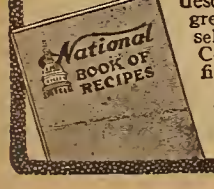

COLD PACK CANNING

By the Steam Pressure Method

described in detail. Shows how to can fruits, vegetables and greens easily, quickly and cheaply either for home use or to sell. Tells how housewives can use the National Aluminum Cooker for both cooking and canning; describes larger outfits made of steel for canning in larger quantities.

FREE Valuable Recipe Book—Cold Pack Canning Instructions—Facts you ought to have about National Steam Pressure Cookers and Canners. Write today.

Northwestern Steel & Iron Works, 810 Spring St., Eau Claire, Wis.

$18 to $2000 for home or factory

Instead of the Junior-Senior Reception

By Emily Rose Burt

INSTEAD of giving the usual banquet and reception to the seniors this year, the juniors in a small school could plan an outdoor picnic and supper. It has the possibility of being jollier than the regulation affair, and is certainly less expensive.

Individual invitations may be sent out to the senior class—quite unusual and mysterious invitations for each one may consist of a colored feather quill with a message written on a slip of paper wrapped about the end. This reads:

Greetings from the Tribe of Nyneteenwahs
To the Tribe of Ateenquas:
Will the Tribe of Ateenquas
Smoke the pipe of friendship
Round the camp-fire of the Nyneteenwahs
On the sixteenth day of the moon of Roses
One hour before waysawi (sunset)?
One of the Nyneteenwahs will act as your guide.

As soon as the two classes have gathered at the picnic ground, the juniors, already decked in head bands of ribbon in their own class colors, may present the seniors with similar ribbons. The boys may have feathers stuck in theirs—if they don't object to head bands.

The chief of the Nyneteenwahs may announce the first stunt as a Hunt for Game, and all must hunt in pairs, matching partners by means of selecting, blindfolded, colored beads from a basket. Pasteboard bows and arrows are supplied, and everyone is told to return at the summons of a beaten tom-tom.

The couples then scatter into the surrounding woods, and hunt for animal crackers which have previously been hidden by a committee of juniors.

The prize for the couple getting the most game might be an animal toy.

Next, volunteers to "Run the Gauntlet" may be called for. The others form in two parallel lines facing each other, armed with pieces of chalk. The victims must run down between the lines to a goal at the end, while the cruel Indians on each side reach out to put a chalk mark on them. The victim who gets the least chalk marks is permitted to select five of his tormentors to perform a series of stunts, previously planned by the junior entertainment committee.

Appropriate ones are these: 1. Give an Indian war whoop. 2. Do an Indian war dance. 3. Give Indian names to five people here. 4. Make a speech in sign language. 5. Tell an Indian story.

Supper should be eaten around a big camp-fire, and should consist of coffee cooked over the fire, nut-bread sandwiches, cold chicken and potato chips, and chocolate ice cream under individual miniature tepees of brown paper.

Paint on each tepee in black some symbol apparently mysterious but in reality characteristic of the owner. Thus, a girl with a beautiful voice and a talent for singing may have a quaint bird on hers; an athlete, a pair of Indian clubs; a domestic science girl, a bowl and spoon or a kettle, and so on.

Redskins and Palefaces complete the menu. Palefaces being cookies with white icing and features marked in candies, and Redskins being apples.

Toasting marshmallows over the fire and singing school ditties and old favorites will end this unique party delightfully.

NOTE: Instead of the games described, a short program might be given. A list of material suitable for such a program may be obtained by sending a stamped self-addressed envelope to the Entertainment Editor, FARM AND FIRESIDE, Springfield, Ohio.

New Puzzle

Word Square

1. A learned man. 2. To distribute. 3. Indifferent. 4. The heart. 5. Particulars.

Answers to Puzzle

Printed Last Issue

Transposition

Deal, dale, lead, lade.

A Mellin's Food Boy

Mellin's Food is rich in all the tissue forming elements that the baby's rapidly growing body demands.

Write for a Free Trial Bottle of Mellin's Food today

Mellin's Food Company

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The secret of Jones' prosperity is spare-time work. If you want to cash in on your spare time drop us a card *to-day*, saying "Tell me how to make spare-time money."

R. J. McNally, Cor. Wittenberg and High Sts., Springfield, O.

CASH for OLD FALSE TEETH Worth up to $21.50 per set (broken or not). Also buy old gold jewelry, silver, platinum. Cash by return mail. Goods held 5 to 15 days subject to your approval of our price. UNITED STATES SMELTING WORKS, 303 Goldsmith Bldg., Milwaukee, Wis.

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Deal with the manufacturer--save money. Protect your life and property at minimum cost. Write today. Full instructions. Satisfaction guar'd.

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How to SAVE When Buying Auto Supplies

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THIS 100-page FREE Book will be the 1918 Auto Snpply Show for over 2,000,000 motorists. Contains many brand new supplies. Over 2,000 selections to choose from. Sit in an easy chair and do your buying. Everything from bumper to tail light. Twenty pages exclusively for Ford Owners. Always refer to it before buying. Write right now for your FREE copy to nearest store.

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Patterns You Can Use

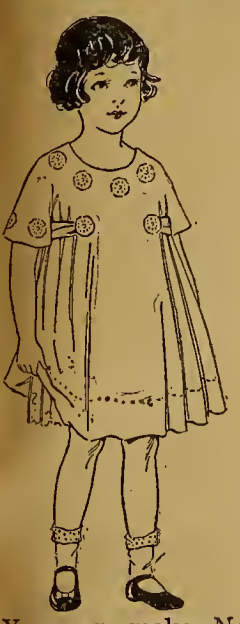
To make your Summer clothes

THESE patterns may be ordered from FARM AND FIRESIDE, Springfield, Ohio.

The newest thing in blouses is the "slip-on." You can make it of dotted swiss, voile, or organdie, and colored collar and cuffs are stylish. No. 3535.

The sleeveless coat in jersey, corduroy or piqué adds the smart touch to a costume. No. 3529.

Try dress and hat in cotton crêpe. No. 3501.



You can make No. 3498 of batiste with crocheted medallions.

Or you can make No. 3498 of two-toned gingham for a play dress.

No. 3498—Child's One-piece Kimono Dress in Two Styles. 2 to 8 years. Pattern, twenty cents.

No. 3501—Child's Empire Dress with Hat. 2 to 6 years. Pattern, twenty-five cents.

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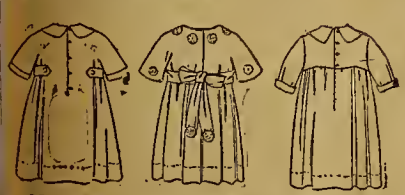
No. 3529—Sleeveless Coat with Shawl Collar and Patch Pockets. 16 and 18 years, 36 to 44 bust. Pattern, fourteen cents.

No. 3535—Slip-on Blouse in Yoke Style. 34 to 42 bust. Pattern, fourteen cents.



No. 3498 No. 3498 No. 3501

Of organdie or voile with embroidered design. No. 3504.

No. 3529 No. 3504 No. 3515 No. 3535

Gown, hat, and bag—all of gingham. No. 3515.

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Makes *Any* Washing Easy

There is an easier way to wash than wearing out your back and the clothes over the washboard. Put 20 Mule Team Borax Soap Chips in the wash water and save two-thirds in time and labor. The Borax softens the water, loosens the dirt and makes the soap work. Use

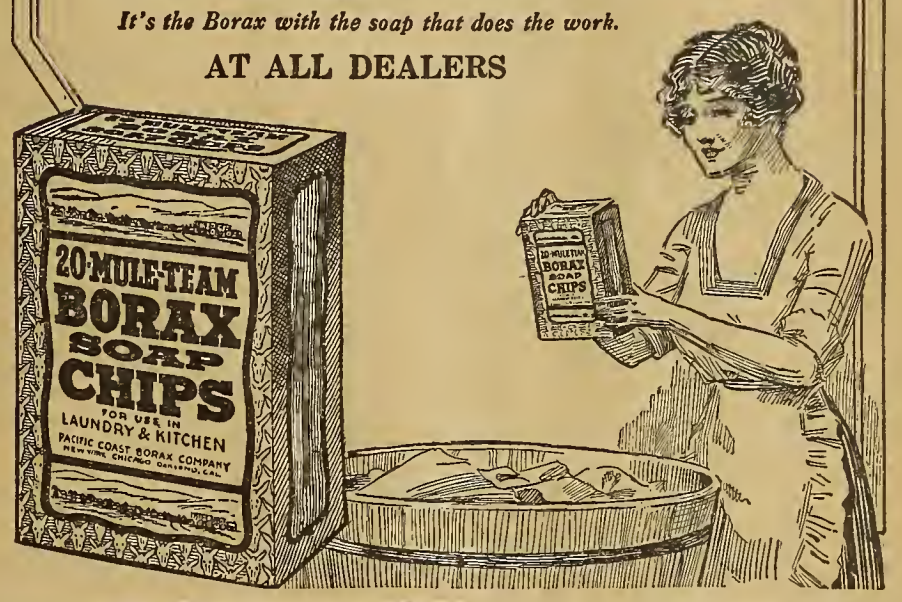
20 MULE TEAM BORAX SOAP CHIPS

this way to get best results:—

Make a Soap Jelly by adding three tablespoons of Chips to a quart of water and boil. Put enough of this solution into the wash-water to make a good suds and soak or boil clothes as usual. Will not shrink woolens or injure fine fabrics. An 8 oz. package of 20 Mule Team Borax Soap Chips equals 25c worth of ordinary laundry soap.

It's the Borax with the soap that does the work.

AT ALL DEALERS



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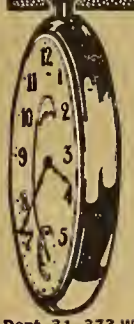

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50 Cents Down—50 Cents a Week for the Rockland Watch

Guaranteed Railroad Timekeeper—backed by our $50,000 Guarantee. Take a year to pay to prove that it makes good. Your money back if it doesn't. The Rockland has 19 Ruby and Sapphire jewels, is adjusted to heat, cold, isochronism, positions, has gold center wheel, steel escape wheel and double roller. In 20-year guaranteed solid gold filled cases. Send 50c and we'll send you the watch on approval. Write today for catalog of watches, diamond rings, and other jewelry for 50c a week.

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Runs on Kerosene
Alcohol or Gas Anywhere

A most remarkable invention. No electricity, wires or springs. 1918 improved patented Models. Runs 8 hours for a cent on kerosene. Quiet—Convenient. Brings genuine comfort and satisfaction. Ideal for the sick. A proved success. 4th season. Increase your efficiency. Every home and office should have one. The Wonder Fan. Two Models. Three Sizes.

BE WELL. KEEP COOL. Address Lake Breeze Motor, 572 W. Monroe St., Chicago

NO WASHDAY BACKACHE

No Rubbing—No Scrubbing—No Washboard Grind

USE I-V WASHING TABLETS

Will not fade color or injure the finest fabrics—16 years' use by careful housewives proves I-V merit—satisfaction guaranteed.

Month's Supply 10c | I-V Co., Dept. A
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WILL MEND IT

PARKER'S HAIR BALSAM
A toilet preparation of merit.
Helps to eradicate dandruff.
For Restoring Color and Beauty to Gray or Faded Hair.
50c. and $1.00 at Druggists.

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22 Cal. Sure Shot
A real gun for rabbits and small game. Let me tell you how to get it **FREE!**
Send for my easy plan. Write quick. Address
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Can with Tin Cans

Less than half the cost of glass, more sanitary because you cook after sealing, absolutely air-tight, light-tight and unbreakable. With the Burpee Home Can Sealer, you can seal 2 or 3 cans a minute. Then cook and put away or sell.

Low Cost — Air-tight — No failures

Don't waste fruit or vegetables — can for the future. It's easy with a Burpee. Start a canning business. Ample supply of cans assured. Write for facts and prices.

BURPEE HOME CAN SEALER
Child can operate
Less than half the cost of Glass
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REAL ESTATE EXCHANGE BUILDING

$850,000 First Mortgage

6% SERIAL BONDS

DETROIT

An unusually stable investment whose value will not fluctuate. Bonds in denominations of $100, $500, $1000 and $5000. Directly secured by First Mortgage on building and land in fee. Valuation $1,771,755. Send for booklet, "A Buyer's Guide to Good Investment."

Federal Bond & Mortgage Co.
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Do You Own a Ford?

OVER 200,000 Ford owners now use H. & D. (Aitchandee) Shock Absorbers to give their cars the smooth, even glide and "road-ironing" comfort of a long wheelbase car—a car with a 140 to 150 inch wheelbase. This wonderful shock absorber *breaks* the rebound—the jounce and jolt of rough roads. It eliminates the jiggle and jar—makes steering easy.

Why not "iron" out the roads for your Ford? Make your Ford ride "like a young Packard." Why continue to let vibration spoil your motoring?

Let Us "Iron" the Roads for You With

H&D AITCHANDEE SHOCK ABSORBERS

On 10 Days' Trial

We hereby authorize your dealer to equip your Ford with H. & D. Shock Absorbers. If, after 10 Days' Trial, you are not perfectly satisfied, he will return your money and remove the shock absorbers, all *at no expense to you.* You can't lose. He can't lose—we even pay him for his work in putting on and taking off the shock absorbers. So—

Take This Coupon to Your Dealer

To Dealer

Please equip the undersigned's Ford with a set of H. & D. (Aitchandee) Shock Absorbers. *If* he is dissatisfied after 10 days' trial, remove shock absorbers and return purchase price. We will pay you according to our agreement.

The H. & D. Co., Inc., Goodland, Ind.

The price is only $10, except west of the Rockies and in Canada. They reduce wear and tear on engine and transmission. Double the life of a Ford, as well as its comfortable riding qualities. That's why Aitchandees are used on ambulances in France. That's why they should be on your car.

The H. & D. Co. Inc. Goodland, Indiana

Name of Ford Owner .....

St. No. .....

City..... State.....

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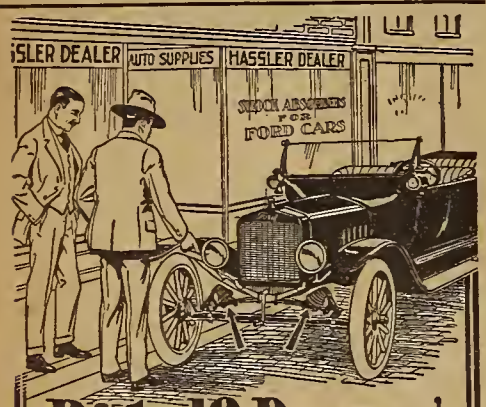
ALL KINDS—LOWEST PRICES
SHULTZ SEED CO.
OLNEY, ILL.



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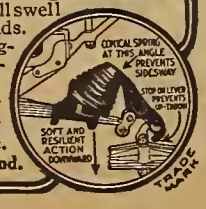

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A Farmer-Governed State

[CONTINUED FROM PAGE 6]

after the warrants for this pay had been ordered, until they first paid their delinquent taxes. He handed out tax receipts and warrants together: the one was not to be had without the other.

The new state official could see no reason why the policy of honesty and the square deal which he had followed on the farm and in his county offices should not be pursued in state office. Accordingly, although ridiculed by the opposition as "only a farmer" and a veritable tyro, he lost no time in seeing who had escaped their just share of taxation and making them shoulder the burden. He found, first of all, that practically none of the private car lines operating in North Dakota had paid any taxes for the last six years. He set about to make a list of these companies, the number of cars they operated in the State, and the value of this property, estimating it as best he could.

Within nine months after he had taken office he had collected for the State the sum of $10,157.88 in taxes from private car lines which prior to his administration had never paid one cent of taxes in all the thirty years of North Dakota's statehood. One company alone paid $2,962.60, without ever stopping to fight the matter in courts or even to argue the amount with the state auditor. They considered themselves lucky to get off without a heavier penalty. This one item alone practically paid the entire year's salary of the new farmer official, yet it was only one fourth the amount collected by him in nine months, while $10,000 more was collected by the various counties and remitted to the state treasurer. Here was $20,000 saved to the people the first year of the farm administration.

269 Unassessed Telephone Lines

But this was not all. Mr. Kositzky lost little or no time in going after the telephone companies of the State. He discovered that there were 269 more telephone lines in North Dakota than had ever been assessed before. The manner in which he discovered this is of interest. He got out a form letter which he sent to every telephone company which was paying taxes. This letter gave a list of all the telephone lines in the counties in which the company addressed operated, and suggested that there might possibly be competitors which were not included in the list. Mr. Kositzky asked each assessed company to look over the list and see if there were not some competitors who had escaped taxation and, if so, to send the names to him.

Naturally, the assessed companies were only too glad to bring their unassessed competitors to time and put all on an equal footing, so it was not long until the shrewd farmer auditor had the names of 269 companies which had never paid taxes, and had assessed their fair share of taxes against each and every one. Most of the companies did as the private car lines had done—paid up and said nothing. A few, however, promised to be obdurate. They were quickly brought to time.

The members of the state board of equalization, who sit at the banquet board with Governor Frazier, Auditor Kositzky, and the other officials, are doing their part too.

Not many years ago the property of the Northern Pacific Railroad in North Dakota was assessed at $941,000. In 1916, just before the farmers obtained control of the State, the Northern Pacific was assessed at $16,132,997. In 1917, the first year the farmers were in power, this assessment was raised to $24,388,133. Practically the same thing happened to the Great Northern. The 1916 assessment of $20,152,048 was raised, in 1917, to $28,317,247. Every railroad in the State, with the exception of two minor ones, had their assessment raised by the farmer board of equalization, the total increase in assessment the first year being $18,349,698, the average percentage of increase being 36.9.

The farmers had sat upon their farms for years and years, watching the assessor list every item of their farm property carefully and assessing it to the limit, knowing all the while that the railroads and big corporations were escaping their just share. Once they came into power they lost no time in making things a little more fair and even.

The theory of the farmer board was that the individual, whether he lived in town, city, or country, had paid more than his full share of the taxation burden for many years, and now it was time for the corporations to take part of the burden from his shoulders. The theory has been in practice for nearly two years now, and the individuals are well satisfied — whatever the corporations may think of it.

The State of North Dakota has been under the control of the farmers since January 1, 1917. They won its control at the November election preceding, electing every one of their candidates for state office, except state treasurer, 87 out of the 113 members of the lower house of the legislature, and 18 out of the 25 senators selected that year. It was a political revolution, though a bloodless one, and the interests which had been supreme for the thirty years of North Dakota's statehood were overthrown so decisively that they have hardly recovered from the shock yet.

There were big plans involved in the farmers' revolution: the erection of state-owned terminal elevators, state-owned flouring mills, state-owned lignite briquetting plants, state-owned packing plants, the issuance of state-guaranteed hail insurance, and so on. For a time it looked as though the agricultural millennium were about to dawn on the treeless plains of the Northwest.

But politicians, although defeated, are not always licked. The politicians of North Dakota, although defeated at the polls, did not give up. They played politics in season and out of season, day and night, with the result that not one of the chief planks of the platform on which the farmers were swept into office has been brought into actual existence. This was due to two things: discord in the ranks of the farmer legislators, when skillfully worked upon by the shrewd politicians; and the farmers' inability to control the upper house of the legislature, due to the fact that there were 25 hold-over senators at the 1916 election, thus giving the farmers a vote of only 18 to 32 in the senate.

But a start was made, and the unbiased observers of to-day believe that the simplicity and honesty which have characterized the rule of the farmers, the democracy evidenced at the Monday bologna lunches, and the eagerness with which everything possible has been done to meet agricultural needs will result in a still greater revolution this year. When the polls are closed next November it is a good bet that the farmers of North Dakota will have entire control of their State.

Will Save Farmers $55,000,000

And then will come the active program, a program backed up by such men as Governor Frazier, Commissioner of Agriculture Hagan, and President Ladd of the North Dakota Agricultural College. There will be a state-owned terminal elevator, flouring mill, and bakery all erected together, at some central location inside the State, where the wheat injustices of former days—costing the farmers of the State $55,000,000 in a normal year—will be dispensed with.

There will be state-guaranteed hail and live-stock insurance. The rule of the farmers will be supreme. For the first time in the history of America, unless all signs fail, a State will have passed from the domination of city commerce and professional politicians and will have come under the rule of the men engaged in the chief industry of the State—in this case, farming.

Nine out of every ten persons in North Dakota either live on a farm or in a town of less than 2,000 population. The percentage for the United States as a whole is one out of two. In North Dakota they have a theory that the nine should determine the laws and the policies, rather than the one. It sounds feasible, yet there has been the greatest difficulty bringing it about, and there has been much hard feeling.

A large task, to be sure, for men who have been "only farmers" all their lives; for men who know no more about politics and dignity, and so on, than to eat bologna on the governor's private table and drink coffee out of cracked porcelain while discussing the people's needs; but a task before which they do not shrink, a task the performance of which is bringing North Dakota into the limelight as no other State has been brought for many and many a year.

Your To-morrow's Beefsteak

[CONTINUED FROM PAGE 4]

Cattle receipts at Chicago during January were the lowest since August, and 20 per cent less than for January, 1917. Nevertheless, the average price for beef cattle weighing 1,200 to 1,500 pounds was the lowest of any month since March, 1917. This condition was extremely unfortunate for the cattle feeder, in view of the fact that many of the cattle coming to market at this time were bought in competition with packer buyers on the high market of September and October.

The serious shortage of cars for Eastern shipments from Chicago, together with extreme weather conditions, was a factor largely responsible for the condition. Independent Eastern order buyers were practically eliminated from the market, and left packers in full control.

The attitude of cattle feeders toward the coming season's operations is probably best indicated by the noticeable falling off in stocker and feeder shipments during January. From 33 principal markets there were 210,623 cattle shipped to the country, a decrease of 22 per cent from January, 1917. Chicago shipments of 8,685 were only 40 per cent of January, 1917, and the lightest of any month for the last five years, with the exception of the period of the foot-and-mouth disease.

This marked decrease at Chicago was due, to some extent, to the extreme weather conditions; however, inasmuch as a similar decrease is noted at the Missouri River markets, it is evident the disastrous losses sustained by cattle men last winter are operating to the detriment of our future beef supply.

Due to the army custom of purchasing 475 to 500 pound carcasses, packer buyers have all along been active competitors of feeder buyers for 1,000-pound steers, with the result that many cattle of this type, which would, under normal conditions, go to the country, are now being slaughtered. Even 900-pound steers showing any flesh are being sought by packer buyers, and as long as this condition prevails the prices for feeder cattle will remain out of proportion to those of fat cattle, and the number of cattle going to feed lots will be greatly reduced.

While recent months have shown some improvement over the January feeder movement, the fact remains that there is still great dissatisfaction and unrest among many feeders. One has but to spend a day at the Chicago market among shippers to become convinced of the lack of faith in the cattle-feeding business until after the war, when the prospects look very bright. After the war not only the beef stocks of Europe will have to be built up but the herds as well.

Remedies as suggested by the trade which would effect immediate improvement may be listed as follows:

Continued removal of all restrictions on the consumption of beef in this country at least until facilities are available to export beef in proportion to the demands of the allied countries.

Increase the weights of carcasses purchased on government contract for army use to a minimum of 550 pounds, and thereby eliminate packer competition from the 900 to 1,000 pound steer of feeder type.

Give the cattle feeder reasonable assurance of a fair profit on his feeding operations. By placing the beef industry on a supply and demand basis, undoubtedly more will be accomplished toward restoring the cattleman's faith in the industry than in any other way.

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ON the battle front in France our khaki-clad American boys are face to face with the ruthless German foe. Shoulder to shoulder with their French, Belgian and English comrades, they are heroically fighting, that the world may be made safe for democracy. They are giving their lives, so that we may continue to live in peace and tranquillity.

We can't, all of us, actually "go over the top" with them, but we *can* go over with them in spirit and in our prayers for their success. They need our support and we owe to them, to ourselves, a thorough understanding of the conditions they have to face and the task that has been assigned to them.

SO that you may have that understanding of the things our boys are facing, so that you may follow them "over the top" and into the lines of the enemy, we have prepared a new down-to-the-minute Atlas of the Battle Fronts. It contains large scale maps of the fronts, Franco-Belgian, American and Italian, showing in minute detail all the towns, villages, forts, wireless stations, railways and battle lines from the English Channel to Switzerland in France and from Switzerland to the Austrian border in Italy.

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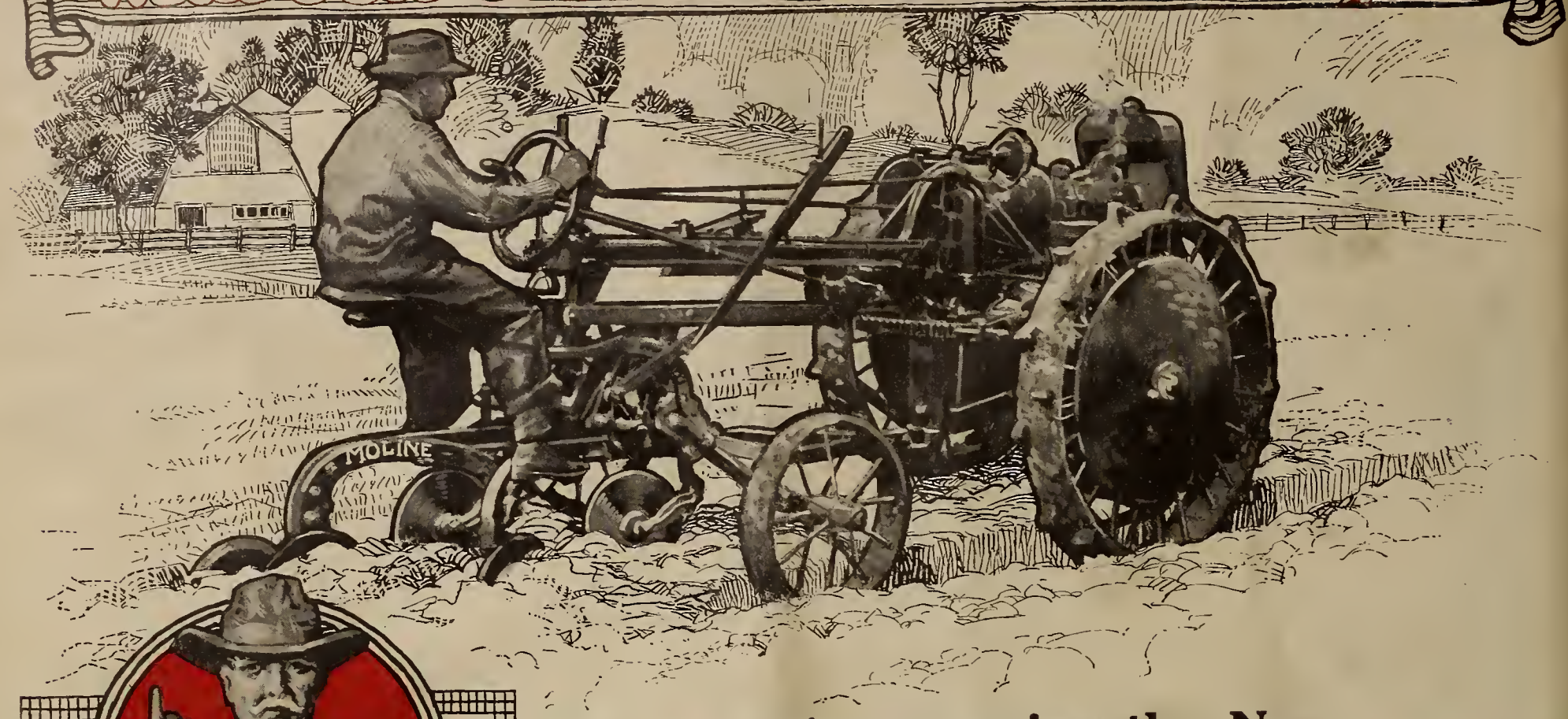

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